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ond-class matter.]

BALTIMORE, JUNE 4, 1908.

Mr. W. J. Johnson of Bowdon, Ga., in
a letter to the MANUFACTURERS' RECORD,
says:

I believe the MANUFACTURERS' RECORD is
doing a great work for the whole country,
and especially the South. Just keep it up,
as everyone who can see anything at all and
knows what you are trying to do is behind
you with strong moral support, and is ready,
if necessary, to back you with something
more substantial.

Mr. M. E. Thornton of the Thornton
Light & Power Co., Hickory Railway &
Power Co. and Water Power Electric
Co., Hickory, N. C., writes to the MANU-
FACTURERS' RECORD:

The idea of writing you fully, frankly and
freely about what I think and know of the
MANUFACTURERS' RECORD has seized me so
tenaciously that I am just going to do it and
free myself of a load, time or no time to
spare.

I have been a follower of the gentle lamb
or big ship ever since it was launched. Ever
since that day it has been a potent factor as
a builder of homes, farm and shops and mills
throughout the entire Southern and South-
western portion of Uncle Sam's moral or
immoral land of the free.

Being myself engaged in industrial enter-
prises, it has transpired that wherever I go
I come in contact with men engaged in busi-
ness on those lines. I have noticed the
MANUFACTURERS' RECORD as a sturdy stand-
by for reference at the logging camps in the
woods near the sawmills, just as much so as
in the big mills in the cities; in the machine
shops in the suburbs; in the stores in towns
and at hundreds and hundreds of farm-
houses. And what is more specifically to the
point, it was eagerly sought for to be read
by every person of each place. It is thus in
my own office; from three to five persons
read more or less of each copy as soon as
they can get hold of it after its periodic
arrival.

The MANUFACTURERS' RECORD has done and
is still doing more real, lasting, substantial

good, more efficient service in progressive
optimism of every hue and shape and sort
in the sections mentioned than any other
dozen things in print.

These are facts as I view them, worthy of
being known by all men, and therefore, in
so far as possible, shall they know them by
these presents.

NEW ENGLAND'S SPIRIT AS AN EXAMPLE FOR THE SOUTH.

The amount of capital invested in manu-
facturing interests in the city of Bos-
ton is greater than the amount invested
in manufacturing in the whole State of
Alabama. Moreover, while Alabama has
but comparatively little money invest-
ed outside of its own borders, Bos-
ton has some hundreds of millions invest-
ed in railroads, industrial and gen-
eral business interests in the West, in
the South, in Mexico and elsewhere.
The deposits in the savings banks of
Massachusetts are about \$700,000,000,
or only 12 or 15 per cent. less than the
total national banking capital of the
United States. And yet even Boston,
rich beyond the dreams of avarice as
compared with much of the South, is
devoting much of its thought to ways
and means to develop its own business
interests and to stir the people of Mas-
sachusetts, and all New England, in
fact, to greater efforts for material pro-
gress. Some of its leading people are
holding public meetings of different
trade organizations and delivering lec-
tures upon the need for greater activity
and energy on the part of the people of
Boston, and for greater zeal in upbuild-
ing work. The Boston Herald and other
leading papers of that great city are de-
voting much space to the discussion of
Boston's needs and opportunities. Day
after day prominent business men are
being interviewed that they may tell
how Boston's progress can be advanced
and its prosperity increased. Think of
such a condition of affairs in a city whose
manufactured products exceeded in value
in 1900 those of Georgia and Alabama,
two of the richest States of the South,
two States whose resources for manu-
facturing development are infinitely be-
yond all the natural advantages of the
whole of New England, and then we
will realize something of the spirit
which should stir the South in its strug-
gle for upbuilding. In a recent issue
of the Boston Herald Mr. Ralph S.
Bauer, president of the Lynn Board of
Trade, discusses the situation in that
section, and says:

The industrial and commercial greatness of
New England lies in the future to such an
extent that the conditions as they exist today
will not be thought of except for purposes of
comparison.

And yet some of our Southern people
have thought that New England had
reached its limit of material advance-
ment. The men who have made New
England what it is do not think so. Mr.
Charles H. Conant of Lowell thinks
New England's "future is destined to be
even more glorious than its past," while
Mr. Edgar Potter, secretary of the
Framingham Board of Trade, expresses
his opinion, based, as he says, on more

or less close connection and observation
of conditions in these States for nearly
75 years, and says:

I have seen the great growth of develop-
ment of the various industries that have
made New England what it is, a wonderful
achievement of intelligence. I have seen
these industries starting work, at first feeble,
but gradually gaining strength by combina-
tion, until they were able to hold their own
against the world. The same spirit of intel-
ligent industry prevails today that has made
us what we are. This is an age of consolida-
tion, an age of great things. Large econo-
mies are secured through combinations. We
could not for a year hold our supremacy in
the boot and shoe, the cotton and woolen in-
dustries, as well as many others, were it not
for the economies secured through the com-
binations that have been effected.

And thus the story runs. One after
another of the leaders in New England's
development tells the tale of the possi-
bilities of that section and points to a
future far greater than the present. If
Boston, and, for that matter, all New
England, needs this spirit of enthusias-
tic optimism for larger development and
greater progress, how much more is the
need in the South, when in proportion
to area Massachusetts has more than
three times as much railroad mileage
as the South, when that one State, ab-
solutely without natural resources, so
small that it could be carved out of any
one of half a dozen of the Southern
States and scarcely be missed, produces
60 per cent. as much manufactured out-
put as the entire South? We of the
South, instead of flattering ourselves
over the progress that we have made,
should really take seriously to heart
whether we have not fallen very far
short of what we might have accom-
plished when contrasted with the mar-
velous achievements of New England.
Whatever may have been the load of
poverty and disaster following the war,
which we had to carry, we can no longer
use that as an excuse or plea for not in
the future more than matching the
growth of New England. Our progress
ought to be as much greater than New
England's as our resources are greater
than its barrenness, but to accomplish
this we must have that spirit of untir-
ing energy illustrated in what New En-
gland has accomplished and which is
shown in the spirit now pushing its peo-
ple forward to still greater things.

COUNTRY BOYS' CHANCES.

Country-bred boys inclined to quit the
farm in the hope of bettering their con-
dition by going to the city ought to get
hold of Farmers' Bulletin No. 325 and
ponder upon some observations by J. A.
Warren incidental to his discussion of
the question of small farms in the corn
belt. Mr. Warren has made a careful
analysis of the operations and the re-
sults therefrom of two 40-acre farms
and one 20-acre farm in Nebraska to
demonstrate what young, strong men,
full of energy and experience as farm-
ers have done and may do in a locality
with which they are familiar. He dis-
avows intention to encourage city men
who know nothing of farming to take to
farming in the expectation of easy work

and large profits, as without economy
and hard work and experience success
is not to be expected on the farm or any-
where else. But he sets forth the par-
ticular facts for the encouragement of
the farm boy who, without prospect of
money necessary to buy a large farm,
is inclined to look elsewhere for employ-
ment. He says:

Farm wages seem small when compared
with wages and salaries offered for other
work, but as a matter of fact they compare
very favorably when rightly considered. The
farm boy, or even the farmer of mature
years, has little conception of the cost of
living in cities. In his experience most
of the living has come from the farm, and he
has not realized that it cost anything.
Thirty dollars a month with board and wash-
ing is common wages for any good hand in
most of this region, and many can command
more. A single man can save as much out of
\$30 on the farm as out of \$55 or \$60 in the
city. A married man can usually secure \$35
or \$40 a month, a house, garden, milk, fuel,
a chance to keep poultry, and often feed for
a pig. This is much more to him than \$60 a
month or \$2.50 a day in town.

The hours required on the farm are not
very much longer than in other occupations.
The farmer is inclined to say he works 16
hours a day if he rises at 5 o'clock and re-
tires at 9, but in most cases, after counting
out meals and rest periods, it is found that
he has not actually been at work more than
11 or 12 hours. In winter the hours are
nearly always much shorter, and at all times
of the year there are stormy days when little
work is done. In town a man working a
team must work 10 hours and take care of
his team and go to and from work outside of
that, so his 10 hours is of about the same
length on the average as the farmer's 16.
For the man who works without a team the
hours are not much shorter when the time
required in getting ready and going to work
and in getting home again are considered,
and if he is in one of the larger cities 10
cents a day must be expended for street-car
fare.

These unconsidered points, it seems to the
writer, constitute the main reasons for the
increasing and deplorable migration of young
men from the farms to the cities, about
which so much is being said and written.

Mr. Warren has apparently not con-
sidered an important factor determining
country-bred boys to seek employment
in the city. In comparing the hours of
work on the farm and the hours of work
of a teamster in the city he seems to be
oblivious to the fact that, in many in-
stances, the country boy leaving the
farm desires to get away as far as pos-
sible from employment requiring muscu-
lar exertion; in short, from direct
productive labor. He looks to clerking
or other middleman occupations, for-
getting that for the great mass of em-
ployees such occupations imply loss of
personal independence that belongs to
the owner and worker of even five acres
of land, a loss which has no compensa-
tion in the so-called social diversions
made easy by the herding of humanity
in the cities.

CAPITALIZATION OF OUR RAIL- ROADS.

A most familiar topic with the dem-
agogue who likes to attack corporations
is the capitalization of our railroad
companies. He loves to talk about wa-
tered stock and of dividends thereon,
or he points to the great total of dol-
lars represented in the aggregate stock

issue and bonded debt (par value), and ridicules even the suggestion that the railroad properties could be worth anything like that. It is a very useful subject to him, firstly because it is nearly always popular to attack something big and his hearers are pretty sure to enjoy the performance, and secondly, because railroad statistics en masse are so bulky that he runs very little risk of encountering among his auditors someone sufficiently familiar with them to put awkward questions. But should he ever be confronted by such an individual he would doubtless be surprised by having briefly set before him sufficient facts to convince any unprejudiced person that our railroads could not be replaced for the sum represented in the stocks and bonds.

While it may not be possible to demonstrate, as by a mathematical problem, that the actual money value of the railroads in this country exceeds their capitalization, it soon becomes apparent to any individual who undertakes to study their beginnings, their growth and their present magnitude with an open mind that if wiped off the map they could not be restored for their securities. It is unfortunate that complete data concerning the railroads in their entirety is always from a year to two years old. Owing to their vastness, it seems to be practically impossible to collect, arrange, analyze and publish the total figures for so many lines in less than 12 or 15 months after the close of the railroad fiscal year, which terminates on June 30 of each calendar year. Thus, the only full data now obtainable is of no later date than the end of June, 1906. Therefore, in any present consideration of railroad problems one must be content with the most recent data, that which was published late in 1907, and which is now nearly two years behind the times. This shows the gross capitalization of railroads in the United States to be \$14,570,421,478. However, as there is included in this total the figures for stocks and bonds of other roads held by certain railroad companies, there is considerable duplication of figures, and in order to obtain a just estimate of railroad capitalization it is necessary to exclude the securities thus owned (\$2,898,480,829), after which the net capitalization is found to be \$11,671,940,649.

To be sure a sum between eleven and a-half and twelve billions of dollars is so enormous that the skeptical may decline to accept unquestioned the assertion that the railroads could not be duplicated for it. But it figures out at \$54,421 per mile of line, or \$36,810 per mile of track, which latter includes second, third, fourth and other additional tracks, besides yard tracks and sidings, this notwithstanding that from 1890 to 1905, inclusive, the companies spent out of income for permanent improvements \$264,885,472, of which considerable more than \$200,000,000 were spent in the seven years from the beginning of 1899 to the end of 1905. But to appreciate what this capitalization per mile means, it is necessary to compare it with the capitalization of railroads in other countries having lines equal to ours. We thus find in a late publication capitalization per mile as follows: United Kingdom (Great Britain and Ireland), \$273,438; France, \$133,871; Germany, \$102,435; Austria, \$108,443; Italy, \$110,104; Russia in Europe, \$94,304; Canada, \$62,403.

Contrast these high figures with the figures for the United States—\$54,421 per mile of line—and it is sufficient to

silence the most carping critic of our railroad companies. But in addition to this it must be remembered that our lines were built by labor much more costly than the labor employed in Europe.

The capitalization of our railroads is not exorbitant, and, considering the receiverships through which a large proportion of our railroad companies have passed, and also remembering their low freight tariffs as compared with the charges on foreign lines, the total railroad capitalization is indeed very reasonable.

It is furthermore estimated in the publication referred to that it would cost nearly fifteen billion dollars to replace our railways in their present state of efficiency with terminals, equipment, shops and all other property connected therewith. Poor's Manual places the cost of railroads and equipment, real estate and other investments (outside of stocks and bonds owned) at very nearly \$13,000,000,000, yet this is nearly a billion and a-half more than their actual capitalization, and the Interstate Commerce Commission gives the cost of roads and equipment alone as \$12,419,387,938.

With these figures—compiled and presented by unbiased students—before one, the accusations of stock watering and overcapitalization leveled against the railroads dissolve and fall harmless far short of their mark.

CRUMPACKERISM AND OGDENISM.

Our friend, the *Constitution* of Atlanta, is apparently at loggerheads with itself in the matter of Crumpackerism. In one breath it describes Crumpacker's "friction-engendering inquiry" regarding disfranchisement as "fooling with dynamite," and says:

The danger lies in incessant reiteration of the idea, driving it home to the ignorant and prejudiced people in the North and making it an issue in national campaigns. It is from intrinsically harmless sparks of this nature that disastrous conflagrations spring.

Very true. But in another breath it urges the people of Atlanta to encourage the Ogden Movement for the education of the South by welcoming to their city in 1909 its Conference for Education in the South.

The *Constitution* evidently does not know that Crumpackerism is simply militant, direct and impatient Ogdenism; it hardly seems to realize that nothing has been more "friction-engendering" in this century than the influences centering in the Movement of which the Conference for Education in the South has been the unwitting stalking-horse.

To reinforce a threat of assailing, under Federal auspices, the limitations of the suffrage which are most pronounced in the South, Crumpacker calls for a mass of statistics as to males of voting age, as to their illiteracy, as to the number whose suffrage has been abridged or denied except for participation in crime, etc. Crumpacker, like the *Constitution*, has probably forgotten that much of such statistical information as far as it relates to voting age and illiteracy was published in 1903 in the annual report of the National Commissioner of Education. The material was put out by the Commissioner because, to use his words, "the results arrived at, as well as the material itself, will be found useful for reference in discussions relating to the right of suffrage."

This material, from the hand of Dr. G. S. Dickerman of Connecticut, fellow

field agent with Booker T. Washington of the Southern Education Board, the first child of the Conference for Education in the South, was, according to the official statement, "prepared under the direction of Charles W. Dabney, president of the University of Tennessee, for the Southern Education Board."

The suggestiveness in the publication had its complement in the same year in the *World's Work*, edited by Dr. Walter H. Page, member of the Southern Education Board and of the General Education Board, in such sentences as these:

Military force, or the fear of it, and nothing less, put the negro in the South for a time in full possession of the ballot. And nothing else can do it again under present conditions.

The South can be punished politically by reducing its representation in Congress, but its conduct cannot be changed by punishment. The ailment is too deep-seated for mere political treatment.

These States have never been real democracies. * * * The problem is to make a democracy possible there. The task can be done only in one way, and that way is to train the people to a higher level of economic life.

Something of the last thought had appeared in an address made in November, 1902, in introducing Booker T. Washington to negroes in New Orleans, when Dr. Edwin A. Alderman, then president of Tulane University, said:

Civilization bottomed on ignorance cannot long endure. The strength to master life must be the strength of knowledge and righteousness. No right-minded man, therefore, withholds his sympathy for one moment from such of your race as are now striving for the reality of freedom once given to them in paper writings and accompanied with hideous mockeries of power and responsibility, but which you must now win, like all defective or disadvantaged races, by work, humility, patience and steadfastness.

Booker T. Washington, an original field agent of the Southern Education Board, later showed how the negro mind might take such an utterance. In 1903 he told negroes in Philadelphia that "now is the time for the negro to seek homes in every part of the country." By 1906, though, he was announcing that the main body of his race had decided to remain permanently in the heart of the South and that, under certain conditions:

Naturally, logically, sympathetically, we shall make ourselves grow into the full and rightful enjoyment and intelligent use of the privileges and rights of citizenship.

In that he was reinforcing the argument of Mr. Robert C. Ogden against the Union League Club's form of Crumpackerism in 1903. Mr. Ogden said:

A large amount of good work is now being done by the best people, North and South, working in harmony for the political and intellectual advancement of the negro in the Southern States. If the race question is brought into national politics by the Republican party, the North will seriously injure its chances for further usefulness and will greatly retard at every point the present hopeful progress of the negro.

And that argument, from the viewpoint of the *New York Tribune*, faithful adherent of Ogdenism, along with the *New York Evening Post* and the *New York Independent*, referring to a spirit that believes that "the best interests of the negro were to be served by hastening slowly" and that prefers "to trust men like Robert C. Ogden and Booker T. Washington rather than one's own preconceptions," was:

While the negro is advancing rapidly and the best people of both races are getting together, and the South is making more and more liberal provision for negro education, and the men of Hampton and Tuskegee are asking, above all, for opportunity to work unhampered by agitation, surely it is a virtue to be patient.

Therefore, for all-around success and essential consistency the Conference

for Education in the South at Atlanta in 1909 ought to feature Crumpacker as an Ogden guest, at least. He needs the almost miraculous alleged conversion that has suddenly come to other guests of the past, a conversion, nevertheless, that has not checked in the slightest degree the determination of the promoters of the Ogden Movement to carry out its original program, a determination that is strengthened every time a Southern "institution of learning" permits itself to be placed upon the list of "beneficiaries" of the General Education Board or Southern farmers become parties to the league between the General Education Board and the National Department of Agriculture.

A POSSIBILITY FOR ELECTRIC RAILWAYS.

Wherever they have been introduced in regions of reasonably large population, high-speed interurban electric railways have met with liberal patronage and popularity. The latest of these to find a place in public esteem is the line between Baltimore and Washington, which is now operating through cars between the two cities at intervals of 30 minutes in each direction, besides conducting an independent service to Annapolis. The success with which this enterprise is meeting again directs attention to the possibility of electricity entirely superseding steam as a motive power for passenger service. The Baltimore and Washington electric line parallels two first-class railroads, namely, the Pennsylvania and the Baltimore & Ohio, each of which operates trains between the two cities at frequent intervals, the Baltimore & Ohio running them for half the day every hour, and the Pennsylvania practically as often. Notwithstanding this, the electric railway, beginning with an hourly schedule, has found itself obliged to start a car every half hour from each terminal.

While statistics are lacking concerning the growth of business on the high-speed interurban railways which have been operating in other parts of the country, particularly the Middle West, for several years, there is no doubt that they have had very similar experiences. To connect two large cities such as Baltimore and Washington by an electric railway capable of making practically the same time as a steam road is only one of the many evidences of the popularity of superior electric service, and it may be that the time will come when passenger travel will be performed on railways equipped with electricity, steam roads being reserved for freight haulage alone. This, of course, is a glimpse far into the future, because there is no electric railway of sufficient magnitude to handle heavy trains over long distances, such as the run from New York to Pittsburg and Chicago. But the practical demonstration of the ability of first-class electric roads to perform their service with speed and punctuality is a hint of what the future may have in store for the transportation world.

The advantages of concentrating passenger service upon one set of tracks and freight service upon other tracks were long ago discovered and made use of by steam roads in congested districts, but to completely separate freight and passenger service over an entire system would be of such tremendous benefit to all concerned that it would not be surprising, in view of developments, to find it realized some day, and perhaps before many years

have passed. The business needs of the country are making greater and greater demands for fast-freight service. On some lines vast improvements have been made, particularly with respect to fruit and vegetable trains, which are sent through on schedules closely approximating in speed those arranged for passenger traffic, and perhaps, in some cases, equaling the latter in rapidity. But the great bulk of freight is handled on most lines subject to passenger schedule. Through freights are obliged to lay off on sidings from time to time to give way to passenger trains, so that the movement of most freight trains takes two, three and four times as long as does the movement of passenger trains. If the freight service could be conducted on one pair of tracks and the passenger service on another each would be subject to delays only in its own department, and the operation of trains could be greatly facilitated. Moreover, the movement of trains could be accomplished with a much greater degree of safety to travelers and employees than is now attainable.

To bring about some such result as this would be a crowning achievement for electric railways. Their comfort and cleanliness are now so well known as to demand no particular remark, but these features are likely to compel their more general adoption where the best passenger service is required. Notwithstanding all the improvements which have been made on the steam lines, it is not to be expected that the public will indefinitely be content to have its eyes filled with smoke and dust and its clothing fouled when both of these evils could be avoided by driving cars with electricity. On the contrary, it would be surprising if the newer motive power failed to bring about a greater degree of cleanliness and comfort to travelers.

HOOK-WORMS.

New York "philanthropy" may shortly be expected to be called on to finance the National Hook-Worm Committee, which ought to give salaries to half a dozen sociologists. It appears that the diagnosis upon which another "uplift" agitation centered in New York has managed to exist for about four years was incorrect. According to a dispatch from Washington, Dr. C. W. Stiles of the Marine Hospital Service is preparing a report that will show that confinement in cotton mills is not wholly responsible for the run-down, debilitated appearance of a number of the cotton-factory children of the South, but that their debilitated condition is due to the hook-worm, that they are victims of uncinariasis. Whether or not the dispatch is correct, it is a fact that Dr. William Weston of Columbia, S. C., recently delivered an address in exposition of this disease, which was known in Egypt 3500 years ago. Dr. Weston stated that the chief symptom is anemia, and that usually one finds in the victim hemic murmurs, difficult respiration, physical weakness, perverted appetite, pains in the epigastrium, swelling in the abdomen and the lower extremities. These symptoms, it will be recalled, coincide in many respects with the symptoms that have been attributed to work in cotton mills, but Dr. Weston advances the thesis that not only seems to demolish the diagnosis, profitable to agitators, that the anemic, emaciated appearance of cotton-mill operatives which have been exploited by them is caused by work in the mills, but also points quite learnedly to the conclusion that cotton mills are really in one sense

hospitals for the cure of uncinariasis. He says:

Thousands of farms in the South are being abandoned because of ill-health, producing starvation, and their former tillers are moving to the mills. These people, when they arrive at the mills, are often, until cured, a care to the manager or their friends who preceded them. Better hygienic conditions, good houses and fairly good food, such as the mills offer, is indeed proving a blessing to these people, and each industrial plant that is built in the South should be welcomed aside from the industrial consideration, because its houses become hospitals for the care of these people.

It is hoped that the study of this disease may be carried beyond the children of the cotton mills for the purpose of ascertaining whether divers literary and oratorical lights who have penny-anted the anemia, the emaciation, the hemic murmurs, the difficult respiration, etc., of the children of the mills, or whose salaried enthusiasm has been aided by such penny-anting, have not become infected by the hook-worm, no matter how remote they may have been from actual contact with the sufferers from uncinariasis, and that they themselves are, consequently, victims of brain anemia, affecting materially their powers of observation and their powers of reasoning.

Perhaps Dr. Weston may be induced to prepare a paper dealing with hook-worms in sociology. One of the symptoms of sociological uncinariasis has been a proneness to deal in what was called "statistics," supplemented by deductions of profound absurdity under the obsession, or obfuscation, that statistics is the science of using selected figures to prove some theory instead of using all figures available as an aid to the discovery of some truth. And, curiously enough, the circulation of Dr. Weston's uncinariasis thesis coincides with a demand actually before the National Conference of Charities and Corrections, that "some sort of critical pruning knife be applied to the wild luxuriance of the statistical jungle outside of official boundary."

The hook-worm and the statistical jungle, or, more properly, the statistical juggle, are respectfully referred to the attention of Senator Beveridge of Indiana. Careful study of them may save him from the pitfalls into which he was led in preparation of his great child-labor oration of January, 1907. He may discover a species of hook-worm not yet catalogued by Dr. Stiles.

Further study, too, may convince him that even "statistics" evolved within the "official boundary," charged specially with U. S. sociology, may be of little value for the right solution of social problems.

BALTIMORE WEATHER.

It is said that Baltimore is one of the most interesting stations of the United States Weather Service. Be that as it may, weather sharps, whether amateur or expert, will be interested in the second volume of the Maryland Weather Service, just issued from the Johns Hopkins Press. The first volume, of a general character, presented the results of long-continued studies of the meteorology and physiography of Maryland. The latest publication, a volume of more than 500 pages, profusely illustrated, deals in the main with the climate and weather of Baltimore and vicinity, and it is the first of a series of special studies within the province of climatological research by the Service under the joint auspices of the Johns Hopkins University, the Maryland Agricultural College and the United States Weather Bureau. Dr. William Bullock Clark, the energetic director of the Serv-

ice, in an introduction dealing chiefly with the operations of the Service and its plans, says that the report on Baltimore climate and weather is "probably the most complete study that has ever been given to the climate and weather of a single city and its environs, and will afford a most important storehouse of information for those who may be seeking for an accurate knowledge of the exact conditions that prevail in Baltimore and its immediate surroundings." This report falls into two parts, the first treating of the average and extreme values of the meteorological elements recorded in the city of Baltimore, based upon careful observations extending over a period of nearly a century, and the second dealing with types of weather experienced in Baltimore and vicinity, the actual physical condition of the atmosphere at stated times, during the prevalence of storms, cold and warm waves, etc. For the completeness and thoroughness of this report credit is given to Dr. Oliver L. Fassig, in charge of the local bureau, under direction of Chief Willis L. Moore of the United States Weather Service.

DUCK-PANTS SOCIOLOGY.

It is reported that a law designed to ensure purity of milk in New York city is causing a ruction in nearby farming communities. There is said to be a provision that milk to be consumed in the Metropolis must be extracted by persons wearing white duck overalls. It is further said that most of the extraction is done by the wives and daughters of the owners of the cows. Hence the ruction. An attempt to meet the provision would undoubtedly swell the movement to the country of amusement-seekers and sightseers, and would tend to revive the social reform movement of 50 or 60 years ago known as Bloomerism. Be that as it may, the incident suggests a moral worthy of consideration by all sociologists, especially those with legislative proclivities. For, with very, very much of the sociological legislation of the day it is a case of duck pants for individuals who would find their movements impeded by the wearing of such garments. There, for instance, is that "model child-labor law" for the District of Columbia, which is not burdened to any great extent with conditions that have made the evils of the employment of immature children possible. The law was in essence sufficient to meet the demands of the most violent sociologist, and yet, according to a dispatch from Washington, it failed to carry the provision, most essential in the eyes of the average sociologist, for salaries for the sociologists charged with enforcing the law. Another case of duck pants or overalls appeared in the bill introduced by a Philadelphia member of the House of Representatives. It is charged that within 102 successive days he attended 103 banquets and wore a clean shirt at each banquet. It is not quite clear whether he was the proud possessor of 103 separate and distinct shirts or whether he made one shirt do for all the functions by having it laundered between times. The presumption is that he used one shirt, inasmuch as the effects of the laundry upon his linen were so demoralizing and distressing that, full of the true sociological inspiration confusing causes in anger at results, he introduced a bill for the regulation of laundry practice in the District of Columbia—a bill probably intended to be a model for benighted sections of the country where folks blessed with the possession of linen shirts, or even cotton ones, are unwilling to wander from the family washtub. In the natural order of things shirts come next to duck pants, and the principle which is embarrassing so many milk-matrons and milk-maidens of New York crops out in the measure of

the Philadelphia Congressman who is so reckless as to insist upon having a clean shirt for every banquet that he graces with his presence. For, his bill prohibits the use of "violent machinery" in laundries. What is violent machinery? And thereby hangs the tail of the shirt and the moral applicable to most sociological legislation: Definition is the door to defiance of moral legislation.

OUTRAGING NATURE.

It is estimated that loss to Texas railroads alone by floods last month amounted to \$12,000,000, of which \$10,000,000 represented property and \$2,000,000 business. If common sense in the handling of forests and in the control of streams had prevailed, how much of this loss would not have happened? The experience in Texas has been more than duplicated at different times in other parts of the country, and it may be expected to be repeated as long as exploiters of natural resources of the country continue to act upon the belief that nature may be outraged with impunity.

THE COTTON MOVEMENT.

In his report for May 29 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 272 days of the present season was 10,760,038 bales, a decrease under the same period last year of 2,217,546 bales. The exports were 6,904,812 bales, a decrease of 1,094,748 bales. The takings were, by Northern spinners, 1,590,734 bales, a decrease of 793,833 bales; by Southern spinners 1,966,613 bales, a decrease of 132,584 bales.

NULL.

About the most practical result of the White House Conference on the Conservation of Natural Resources was the failure of Congress to provide for immediate action for the protection of the headwaters of important natural highways of the country. But what did Congress not fail to do or not make a mess of in attempting to do?

The Hardware Convention.

Among the speakers for the joint convention at Hot Springs, Ark., next week of the American Hardware Manufacturers' Association and the Southern Hardware Jobbers' Association are Messrs. J. D. Moore, Moore & Handley Hardware Co., Birmingham, Ala.; Harvey L. Anderson, Anderson Hardware Co., Atlanta, Ga.; Hugh Fox, Fox Brothers Hardware Co., Pine Bluff, Ark.; H. Young, Southern Hardware & Supply Co., Mobile, Ala.; W. W. Webber, Webber-Ayers Hardware Co., Fort Smith, Ark.; W. F. Stephenson, Barnes & Miller Hardware Co., Memphis, Tenn.; J. Van Dorkum, Fones Brothers Hardware Co., Little Rock, Ark.; R. F. Bell, Wm. Henry & R. E. Bell Hardware Co., Fort Worth, Texas, and S. Norvell, Norvell-Shapleigh Hardware Co., St. Louis, Mo.

The officers of the American Hardware Manufacturers' Association are Messrs. Charles W. Asbury, Enterprise Manufacturing Co., Philadelphia, president; William M. Pratt, Goodell-Pratt Company, Greenfield, Mass.; Edward Ingalls, the Atha Tool Co., Newark, N. J.; Robert Garland, Garland Nut & Rivet Co., Pittsburg, Pa., vice-presidents; F. D. Mitchell of New York, secretary-treasurer, and C. A. Earl, the Corbin Screw Co., New Britain, Conn.; Julius C. Birge, Ames Shovel & Tool Co., St. Louis, Mo.; F. S. Kretzinger, American Fork & Hoe Co., Cleveland, Ohio; T. H. Taylor, American Steel & Wire Co., New York, N. Y.; F. E. Muzzy, Chicopee Falls, Mass.; W. T. Johnson, American Axe & Tool Co., Pittsburg, Pa.; Fred S. Merrick, Standard Horse Nail Co., New Brighton, Pa.; W.

G. Bennett, Lawson Manufacturing Co., Chicago, Ill., and G. H. Jantz, executive committee.

The officers of the Southern Hardware Jobbers' Association are Messrs. John Donnan, W. S. Donnan Hardware Co., Richmond, Va., president; W. L. Sanford, Roberts, Sanford & Taylor Company, Sherman, Texas; H. R. Miller, Barnes & Miller Hardware Co., Memphis, Tenn., vice-presidents; C. E. Kersey, Richmond, Va., secretary-treasurer, and W. A. Parker, Beck & Gregg Hardware Co., Atlanta, Ga.; Charles H. Ireland, Odell Hardware Co., Greensboro, N. C.; Bruce Keener, C. M. McClung & Co., Knoxville, Tenn., and O. B. Barker, Barker-Jennings Hardware Co., Lynchburg, Va., executive committee.

UNINTELLIGENT COMPETITION.*

One of the greatest barriers in the general adoption of the one-price system is unintelligent competition. Unintelligent competition is based principally upon two things, namely, lack of knowledge as to what competitors are doing and lack of knowledge of the cost of doing business in merchandising, or of the cost of production in manufacturing. Unintelligent competition being one of the greatest obstacles in the way of the one-price system, it follows that the elimination of the causes of unintelligent competition is desirable in order to bring about the universal adoption of the one-price policy. Misinformation as to what competitors are doing can be reduced to a minimum by the encouragement of associations and co-operation among merchants and manufacturers in any given line of business. Meetings among business people inspire confidence in each other, enable them to interchange experiences relative to the cost of commodities or production, and to compare notes with reference to the misrepresentation of unscrupulous buyers.

The one-price system should be based upon cost, plus a reasonable percentage of profit. The public should be educated to recognize the justice of this formula, and the unscrupulous buyer, who makes misrepresentations in order to beat down the price to the point of cost, or less than cost, should be frowned down and looked upon in the same light as the person who takes something that does not belong to him. Only through intelligent co-operation among competitors can the relics of ancient abuses in trade be eradicated. The public is entitled to a "square deal"—no more and no less—and the same is true of the merchant and the manufacturer. There should be no temptation, through the medium of association or co-operation, to charge unreasonable or excessive profits, and there should be a disposition shown to take the public into the confidence of the commercial interests more than has been done in the past. Unwarranted profits, or profits on fictitious investment, should not be permitted. In time suitable laws will be enacted to safeguard the interest of the public in this respect; at the same time, legitimate co-operation should be encouraged and the drastic anti-trust laws amended, so as to not make criminals in law out of people who are not violating any real rights of the people. Unintelligent competition is the cause of more failures, bankruptcy and closed shops than any other known reason. The public derives no permanent benefit from the violent fluctuation in prices resulting from failures, and the loss and suffering of employees thrown out of work by reason of such failures are far greater than any possible benefits from maintaining a condition of unintelligent and unbridled competition. Until there is a general adoption of the

one-price system there can be no reasonable stability to employment or indefinitely continued industrial prosperity.

A striking example of the evil effects of these violent fluctuations in prices and of absence of the one-price system is to be found in the present situation with reference to the important commodity, pig-iron. The price of this material is absolutely at sea. Buyers do not know what they ought to pay for pig-iron, and they are afraid to place an order of any consequence for fear prices may go lower and place them at a disadvantage with competitors who might buy at the lower price. The result is that people are buying "from hand to mouth," and those who need pig-iron in quantities are making bids which are below the figures at which reputable furnace operators say the iron can be produced. The scattering orders are insufficient to give the blast furnaces a line on the possible requirements of the country, with the result that furnaces are being operated uneconomically, or are being blown out, as the case may be. If the owners of the blast furnaces would fix an equitable price at which pig-iron should be distributed to the consumers by the brokers and jobbers, it would be more satisfactory to all parties concerned. If buyers felt that the commodity was upon a stable basis, advance orders for prospective requirements would be placed, aggregating millions of dollars, and many workmen, now idle, would be given profitable employment, and rolling stock, standing empty on the side-tracks of the railroads, would be in use, performing its normal function of transporting tonnage. Under conditions existing in the dark ages it may have been true that competition was "the life of trade," but under modern and progressive methods such competition, as before described, is certainly "the death of business." It must not be assumed that the one-price system means the destruction of true competition. Competition does not consist of cutting the life-blood out of trade. Anyone can give away goods, which is substantially the same thing as selling at cost or less than cost. True salesmanship consists of going in upon an equality of price and terms and landing the order by convincing the purchaser that a certain line of goods is best.

Concrete in Case of Fire.

At a recent meeting of the Insurance Society of New York Mr. J. P. H. Perry of the Turner Construction Co., 11 Broadway, New York, delivered a stereopticon lecture on "Modern Methods of Concrete Construction." He said, in part:

"The average insurance man has a rather prejudiced idea in regard to concrete. He has been told that it will collapse; that it is liable to crumble under fire, and that as a first-class building proposition it is unreliable. These views render him somewhat skeptical, so that he will have to be convinced as far as reinforced concrete is concerned. It is an easy thing, however, to comply with this spirit of the insurance world and show them positively that reinforced concrete as a fireproof material is practically without equal at the present time; in fact, all things considered, it is probably the best all-around building material yet devised by man. Such conflagrations as those in Baltimore and San Francisco, and numerous smaller fires, such as those in the Huyler candy factory in New York, the Pacific Coast Borax Co.'s Bayonne plant, and that in the works of the Dayton Motor Car Co. in Dayton, Ohio, have demonstrated rather conclusively the ability of reinforced concrete to come through fires, of sufficient intensity and prolongation to fuse copper and melt brass, without material injury to the building proper.

Particularly interesting along this line is the fire last mentioned in Dayton, Ohio. The Dayton Motor Car Co. erected an addition to its plant of reinforced concrete throughout, six stories high, and about 100 feet square. This new building adjoins a five-story brick and mill-construction factory. And so recent, at the time of the fire, was the completion of the concrete addition that automatic fire doors had not been installed to protect the openings between the old brick building and the new concrete building, and the sprinkler system in the concrete addition had not been connected up with the water supply. A fire started on the fourth floor of the concrete building in the upholstery and finishing department of the automobile factory. The local fire department upon its arrival at the fire decided at once that the concrete building was thoroughly capable of protecting itself, and consequently they devoted their entire attention to saving the adjoining brick building. The fire in the concrete building raged for several hours, and was of sufficient intensity to melt some of the sprinkler pipes and to completely gut the floor. Meanwhile it had spread through the unprotected openings into the brick building, and in spite of the efforts of the local department this first-class brick and mill-construction factory was practically ruined. The roof and three floors fell in and the walls were badly cracked.

"This comparison between brick and first-class mill construction and reinforced concrete under disadvantageous circumstances is perhaps as good evidence of the ability of reinforced concrete to protect the owner against serious loss from fire that has yet appeared.

"As to the speed of erection possible with reinforced concrete, no better example can be cited than the Rogers & Pyatt factory at 34 Fletcher street, Manhattan. This is a 10-story reinforced concrete factory, approximately 70x60 feet in plan, which was completed ready for occupancy in three and one-half months, and the roof of which was put on in 47 working days after the foundations were completed. The Bush Terminal Buildings at 36th street, South Brooklyn, each of them 600 feet long by 75 feet wide, six stories and basement in height, also bear evidence as to the quickness with which reinforced concrete may be erected. Model Factory No. 3 was built in 63 working days after the pile foundations were completed. Considering that this mammoth structure has approximately seven acres of floor space under one roof, the putting on of the roof in 63 days is worthy of note in connection with any statements to the effect that concrete is a slow material to build."

To Prevent Floods.

A plan has been proposed to stop forever the costly spring floods at Pittsburgh and other places along the rivers which drain the Appalachian mountains. These annual devastations are so certain in their recurrence that they have come to be considered almost inevitable. All the efforts of the Government with dams, restraining walls and other engineering works have proved inadequate to control the streams when they have been swollen with the melting winter snows. On the other hand, the Government projects have proved unavailing to maintain these same rivers at a depth great enough to permit unhampered navigation later on in the year, when the flood waters have spent themselves. This later trouble possibly causes a greater financial loss to the South than the floods, but as it is not concentrated into a brief spectacular outburst, less is heard of it through the newspapers. It was, indeed, the problem of navigation that gave rise to the present scheme.

It is now proposed to go to the seat of the evil—to the headwaters of the rivers—and apply there two remedies: First, the maintenance of a forest cover which will keep the ground porous so that it will not shed all the water from its surface at once but will soak it up and release it gradually; second, to establish storage reservoirs at strategic points which will retain surplus flow when it is not useful but only does damage by being allowed to run free, and will pay it out, little by little, later on, when it is sorely needed.

The United States has spent \$30,000,000 to improve navigation on the rivers which have their upland sources in the Southern Appalachians, and work already undertaken will cost at least \$56,000,000 before it is finished. This does not include the Ohio proper, which is largely supplied with water from these sources, on which more than \$6,000,000 has been spent. Despite this outlay, navigation is so precarious on many of these rivers, especially in the upper stretches, during several months every year that steamboat lines have to suspend operations, and many companies have abandoned the field because with the light-draft vessels they are forced to use they cannot compete with railroads, although steamboat transportation is normally much cheaper than railroad rates. The Government has striven for a four-foot depth, or even, in some places, for a three-foot stage, and been unable to maintain it throughout the year.

Experts from the Geological Survey, with the storage reservoir scheme in mind, last year made a careful study of the rivers which flow from both sides of this watershed, located reservoir sites, computed the amount of water they would hold, the heights of the necessary dams, and the periods during which the rivers could be maintained at various depths above their low-water levels during the dry seasons. The results of this study are published under the title "The Relation of the Southern Appalachian Mountains to Inland Water Navigation," as Circular 143 of the Forest Service, and can be obtained free by writing to the Forester at Washington. The initial cost of these reservoirs would be greater than the works under the present system, but the authors of the circular say that the storage reservoirs would give the relief, both in regard to navigation and to floods, which the present projects fail to supply, and they point out that the relief so gained would be permanent, whereas under the system now in operation there is a continuous expense in dredging the channels, which become clogged with sand and silt washed down by the spring floods, especially from the unforested areas around some of the rivers.

In the long run the storage reservoir method would be cheaper as well as more effective, for, as one of the sponsors of the plan says, it is better business to add to the tops of the rivers and get what you want than to keep digging out the bottoms in an attempt to get a river deep enough to float a boat in.

At the recent convention of the National Electric Light Association in Chicago, Ill., the following officers were elected for the ensuing year: Messrs. W. C. L. Eglin, Philadelphia, Pa., president; Frank W. Frueauff, Denver, Col., first vice-president; W. W. Freeman, Brooklyn, N. Y., second vice-president; John F. Gilchrist, secretary and treasurer; C. L. Edgar, Boston, Mass.; Alex. Dow, Detroit, Mich., and Arthur Williams, New York, for full term of executive committee, and R. M. Searle, Rochester, N. Y., for the unexpired term on executive committee of Samuel Scovill.

*From an address before the National Association of Manufacturers by Mr. C. C. Hanch, vice-president for Indiana.

HANDSOME PASSENGER STATION.**Improvements Made by the New Orleans Terminal Co.**

[Special Cor. Manufacturers' Record.]

New Orleans, La., May 30.

Preparatory to the opening for traffic next Monday of its new passenger station at Basin and Canal streets, the New Orleans Terminal Co. today threw open to the public the doors of the new building,

of the shopping district, with all the car lines of the city either passing the doors or but a short distance away. In comparison with the old depot of the New Orleans & Northeastern, hardly more than a shed, and located far beyond the center of the city, the convenience, accessibility and comfort of the new station are an almost incalculable advancement from the standpoint of the traveling public. The building is also notable as an

Burnham of Chicago. James Stewart & Co. were the general contractors, and they did the concrete-construction work. The granite was furnished by Venable Bros., Atlanta.; the Bedford stone by the Furst-Kerbes Cut Stone Co., Bedford, Ind.; the brick by the Hydraulic Press Brick Co., St. Louis., and the marble by the N. O. Nelson Manufacturing Co., St. Louis.

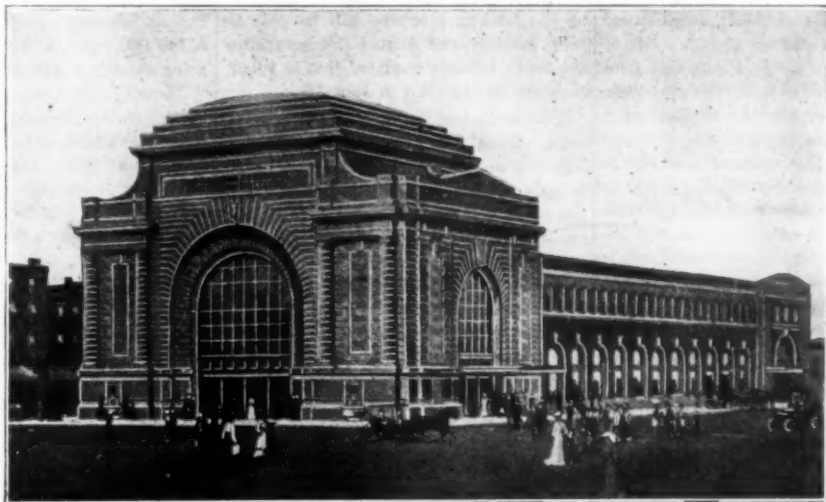
The new station will be used by the

terminal company, by means of a 99-year lease from July 1, 1903, gives to the Southern and the Frisco joint operating rights with itself, the Southern, in turn, naming the New Orleans & Northeastern as the operating company, caring for the interests of the Southern, the Alabama Great Southern, the Mobile & Ohio and the New Orleans & Northeastern railroads under this lease.

The properties owned by the New Orleans Terminal Co. include the extensive real-estate holdings in New Orleans partly occupied by the passenger and freight stations; the passenger station just opened at Basin and Canal; the extensive freight terminals on St. Louis street, opened several years ago; the property of the old New Orleans & Southern Railroad, including the old Chalmette dock properties; the new Chalmette improvements and the outer belt line. The freight terminals on St. Louis street are remarkably well appointed and afford a downtown freight delivery, with facilities not excelled anywhere.

The belt road extends from Shrewsbury, on the Illinois Central, near Harahan yards, around the back of the city to Port Chalmette, with a line into the freight terminals on St. Louis street and the passenger terminals on Basin street. It connects with the lines of the Illinois Central, Yazoo & Mississippi Valley, Louisiana Railway & Navigation Co., Louisville & Nashville, New Orleans & Northeastern and New Orleans Great Northern—every road coming into New Orleans except the Texas & Pacific and the New Orleans, Fort Jackson & Grand Isle—and is thus a true outer-belt road. It has 28 miles of main track, and, including sidings, the total trackage is 67 miles.

At Chalmette the enormous new concrete wharves and steel sheds of the com-



NEW PASSENGER STATION AT NEW ORLEANS OF THE NEW ORLEANS TERMINAL CO.

and the New Orleans & Northeastern Railroad officials entertained the Mayor and a number of invited guests at a reception held in the room of the directors of the terminal company. From 3 o'clock till 9 this evening the handsome structure was thronged with the people of New Orleans and visitors to the city, including members of the State Legislature and others who were here to spend the week-end in the city, and at the reception in the directors'

enterprise, in that it marks the completion of one of the several important improvements being made here by the New Orleans Terminal Co.

The new building fronts on canal street, with a width of 85 feet, and, in addition to the main entrance on Canal, there are side entrances and exits on both the Basin-street sides. Four tracks enter the station. The steel sheds are of the umbrella type, 700 feet in length. The sta-

New Orleans & Northeastern, the southern link in the Queen & Crescent system, and by the New Orleans Great Northern, the Goodyear road, for all their passenger trains hereafter. For passenger purposes the old Press Street Station will be abandoned entirely. On the completion of the Frisco-Rock Island companies' Texas-Louisiana connecting and extension lines the Frisco road will run trains into the new terminal station. The New Orleans



PANORAMIC VIEW OF FRISCO IMPROVEMENTS AT CHALMETTE, NEAR NEW ORLEANS, SHOWING SLIP, WHARVES AND SHEDS. From a copyright photograph by Frank B. Moore, N. O.

room there were speeches of felicitation and congratulation over the inauguration of the new enterprise.

To the traveling public the opening of the new station means much in the way of convenience, for by it passengers on the Queen & Crescent line are enabled to arrive at and depart from a handsome passenger station, with all the best accommodations of the most modern structure of its kind, located on Canal street within a few minutes' walk of all the principal hotels in the city, and in the midst

tion is of concrete and steel construction. The three facades and dome are of Bedford limestone, with bases of Georgia granite, and the rear walls are faced with pressed brick. All the concourse or lobby has a high wainscoting of Carrara marble. The various waiting-rooms are handsomely trimmed and furnished, and other features include a notably spacious room for ticket sellers. On the second floor are rooms for the officers of the terminal company.

The architect of the building was D. H.

Great Northern comes into the station under the terms of a leasing privilege. It is possible that one or two other lines may later on be given terminal facilities here.

The terminal station and other valuable properties in the way of railroad and river terminals and belt-line railroad are owned jointly by the Southern and the Frisco railroads, the ownership being in the shape of a corporation known as the New Orleans Terminal Co., with a capital of \$2,000,000, held in equal parts by the Southern and Frisco companies. The

pany are under construction at a cost of some \$4,000,000, and are expected to be in operation early in 1909. At a 45-degree angle down stream a slip has been created, 300 feet wide and 35 feet deep, with a wharf 1300 feet long on one side and 1700 on the other. There is room in the slip for seven ocean-going vessels at a time. There are seawalls flanking this slip, 565 and 400 feet long, respectively, where two other ships may tie up. There are steel sheds the entire length of the wharves, one of two stories

and the other of one, and there are fire-walls and complete water protection from fire. This improvement is in itself one of the most notable in the development of railroad terminals in the world, and its beginning has been followed by the equally gigantic enterprise of the American Sugar Refining Co., whose group of buildings are under construction a few hundred feet up the river.

At Port Chalmette are the old dock and terminal properties formerly belonging to the New Orleans & Southern, consisting of wharves, warehouses, grain elevator with 500,000 bushels capacity, and, as a recent and interesting development, seven creosote tanks with a total capacity of 8,000,000 gallons. A considerable business has been built up in the importation of creosote from Germany and from Hull, England. It is stored at the Chalmette tanks and distributed throughout the country in tank cars. At old Port Chalmette there is room for five ships to tie up at a time, besides the accommodations for a creosote vessel.

There has been no halt in the progress of the work on the plans outlined when the Frisco and Southern roads made their New Orleans purchases five years or so ago, and it is stated as a fact that developments here in sight will represent an expenditure by these interests of all of \$15,000,000.

ALBERT PHENIX.

ADVANCE AT BIRMINGHAM.

Gratifying Developments in the Iron Market.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., June 1.

The iron market not only held its own during the past week, but it scored an advance. The sales were large enough to satisfy two of the interests and make them announce that they would be out of the market as further sellers for some time to come. One of these interests states that its sales for the week will cover about 25,000 tons, with nothing sold beyond September delivery. It is estimated that the sales of the other interest will approximate those made by the former, with the majority of them for third quarter delivery. The sales of the Sloss Company, as announced by J. W. McQueen, the first vice-president, will foot up to 100,000 tons during the month of May. Sales made by the other interests are on a similar scale, and the aggregate of the orders booked will tax the credulity of your readers. They have been surprising to those of the trade who failed to keep "tab" on them. It is within the limit of truth to say that the registered orders on the furnace sale books amount to more than 550,000 tons. It is estimated that there is possibly around 100,000 tons that can be considered as dead orders, leaving as a nucleus for the filling of the live orders the stock in furnace yards. That is estimated all the way from 75,000 to 125,000 tons. Make a conservative estimate and say it is 100,000 tons. Deduct the 200,000 tons from the 550,000 tons and we have 350,000 tons so far to make to even up sales with recent purchases. In the meantime we will have to care for the new business that will be constantly coming in, and we must make iron faster than it will be demanded. Can we do it? If we can, we must get a move on the furnaces, and that quickly, and after we get a move on them we must keep the pace we set at the start. It will be long months before demand and supply are evened up.

The character of the demand has been a surprise. The large interests, as a rule, have not supplied their wants, and they "pooh-pooh" the idea of a continuous demand. They speak of it as a spurt. These same interests, when the market was near \$10 for No. 2 foundry, could see no good

in it, and declined to buy. It is the buyer of moderate tonnage who has been agitating the market, and he is yet in evidence. He will be reinforced by his "heftier" brother in the business and have the satisfaction of feeling that he was first at the post. As to the grades purchased, they were all covered, showing that the purchasers were restocking after allowing their stocks to dwindle to a rundown condition.

At the banquet Saturday night to celebrate the incoming of the Illinois Central Railroad to this district and this city it was authoritatively stated that that road had lately contracted with the steel company here for 40,000 tons of steel rails for delivery during the year, and that this order expedited the resumption of operations by the steel mill and its subsidiary accessories. The announcement came as a surprise, but as it was made by the counsel of the steel interests in this district, it bears the mark of authority.

The market close of the week was very firm, with \$12 for No. 2 foundry as the market price. It is possible that under favorable conditions a moderate amount could have been obtained at a reduction of 25 cents. But the asking price, as a rule, was \$12, with but one interest holding out any hope for lower value.

One favorable feature of the market was the buying of good lots of basic iron. It is gossip of the market that the sales of this grade in the immediate past will aggregate at least 75,000 tons. There is good foundation for the statement. People don't buy that grade to stack it up. The buying of basic means that it is wanted to melt. From good authority it is learned that 5000 tons of foundry iron went early in the week, for last half the year delivery, at basis of \$11 for No. 2 foundry. At \$11.25 5000 tons went for delivery in June, July and August, and at \$11.50 there were free sales of lots varying from 5000 down to insignificant lots of 100 tons, and for all the deliveries the balance of the year. But the majority of them were for the third quarter. Comparatively speaking, they were not free for the fourth quarter. At \$12 sales of very respectable amounts were made for the various deliveries up to the fourth quarter. But the insistence of this delivery was in numbers of cases gratified. For nearby delivery, particularly, some sellers were insistent on the price, and they got it. At \$11.75, for delivery up to fourth quarter, there were some sales of No. 2 soft, and the price brought out some analysis iron at the top prices paid during the week. One interest at the close of the week announced that they had advanced price to a \$12.50 basis for No. 2 foundry, and did not desire to sell further at present.

Sellers are very conservative, and do not desire to see any further enhancement of values at present. There has been some speculative buying, and some of the shrewdest operators have taken a flyer at the market. But the market has advanced because of the legitimate buying, and it yet has every appearance of an advancing market.

The pipe market is at present alert over the gigantic plans for San Francisco's water system. It is said if the plans now perfected are carried out that this will be the most complete fire-fighting plant in the world. The quantity of pipe required is expected to be large enough to take the greater part of the idle capacity now available. Inquiries this week from other sources are numerous and heavier than they have been heretofore during the past six months. More orders have been received on telegraphic quotations, indicating the decision of buyers that prices have touched bottom. Quotations today

in the Birmingham market are: Four-inch, \$23 to \$24; six-inch, \$22 to \$23; 8, 10 and 12-inch, \$21 to \$22; 16-inch and larger, \$20 to \$21 net ton. Where there is severe inspection or late deliveries in view these prices are questionable, as it is the belief of everyone that August and September prices will be from \$3 to \$5 in advance of present quotations. Two of the smaller interests are now reported to be out of the field for several months, and it is anticipated that not more than three of the leading interests will be able to book for July and August shipment after the heavy tonnage is placed that is advertised for letting prior to June 10.

The scrap-iron market is reported as very strong at unchanged quotations. There is an increased inquiry that promises to crystallize into an active business. On some of the grades there is perhaps a small advance asked, but it is not general, and prices are, as a rule, as quoted by Weller & Co., as follows, viz.:

Old iron axes, \$14.
Old iron rails, \$14.
Old steel axes, \$14.
No. 1 country wrought, \$11.50.
No. 2 country wrought, \$11.
No. 1 railroad wrought, \$13.
No. 2 railroad wrought, \$11.
Old car wheels, \$12.
No. 1 malleable, \$11.
Machinery castings, \$9.50 to \$10.
Wrought-iron pipe and flues, \$10.
No. 1 steel, \$10 to \$10.50.
Stove plate, \$9.
Cast borings, \$6.

There is a pretty good tonnage in stocks being carried in the yards, and dealers are prepared to meet any reasonable demand.

A few of the furnaces are being prepared for the resumption of operations, and the probabilities are that some will be killed for necessary repairs. The Sloss Company put one in and took one out. Over at Anniston we learn that the inwall of the furnace being repaired fell in, which accident will delay return to activity. The Tennessee Company has begun the necessary repairs to the Alice furnace to put it at work on basic iron. Whispers concerning other stacks are in circulation, showing that the furnace people don't sleep on beds of roses.

In coke there has been quite a flurry the past week, and emissaries have been at work locating every car that was available to the market. The demand was greater than the supply, and the shortage with some was acute.

During the year ended May 1, as per the report of the secretary of the Commercial Club, 198 corporations, representing a capitalization of \$7,465,100, filed their papers of incorporation and those already incorporated increased their capitalization \$7,607,000.

J. M. K.

Building at New Orleans.

[Special Cor. Manufacturers' Record.]
New Orleans, La., May 30.

A general resume of the building situation here shows that extensive operations in the matter of residences are being carried on. Though no large jobs are on the market at the present time, several are in contemplation, and developments of interest are looked for within the next week or two. During the last week there have been issued from the office of the city engineer permits for residences alone costing in the aggregate more than \$50,000. Of these, the largest is the brick and stucco residence which Capt. A. M. Halliday expects to build on the Exposition Boulevard at Pitt street at a cost of \$15,000. Several other residences, both up and down town, have been contracted for, while among the lot for which permits were issued was one costing \$7200, two costing \$5000 each, two

costing \$3400 each and several others for \$2500 and \$2600 apiece.

In addition to these, George J. Glover, a well-known local contractor, is still busy with the new Monteleone Hotel, the steel structural work on which has reached the fourth story. He has also the new Weiss office building in Common street, the Richardson Memorial building on the Tulane camps, the new plant of the American Paint Works, and several other jobs. Ambrose B. Stannard of New York is making satisfactory progress on the new \$1,097,000 court building, while work is going steadily ahead on other contracts.

There is a good deal of work in contemplation at the present time. The New Orleans Chess, Checkers and Whist Club, one of the most widely known of the city's institutions, is looking around for a desirable site on which to put its new home. The club expects to spend about \$300,000 for a site and building. The site will probably cost in the neighborhood of \$100,000, and with the remainder the institution will put up a modern and up-to-date club building. Architects Diboll, Owen & Goldstein will probably have these plans. Morris McGraw is still contemplating a big four or five-story structure to replace his store, which was recently burned. It is understood that Mackenzie & Biggs will have these plans.

Plans are now on the market for the new McDonogh School No. 23 that is to be erected in Carrollton. This will be a modern and thoroughly up-to-date school building. It is announced that Architects Frank G. Collom & Co. will soon have plans out for four big buildings. Architects Debuys, Churchill & Labouisse are completing the plans and specifications for a big Episcopal school building that will be erected at Vicksburg, Miss. The structure will be five stories in height. Contractor W. O. Erwin has been awarded the contract for the new Mater Dolorosa Church in Carrollton. His bid was \$50,978. Many plans for residences ranging in cost from \$2000 to \$8000 and \$10,000 are also on the market, or will be in the near future, indicating considerable activity among the architects and builders of the city.

State and Railroad.

Change that is taking place in public opinion as to the relation of the State, the people and the railroads reinforces the wisdom of a communication published last January in the Atlanta Constitution from Mr. J. W. Oglesby of Quitman, Ga. Mr. Oglesby is president of the South Georgia Railway Co., president of the First National Bank of Quitman and has large factory interests as well as large agricultural interests in Brooks county. He is, therefore, in a position to view the question from many points, and some of his suggestions are worth reproducing at this time. He wrote:

"Under the present policy, and at the present time, the definition of regulation means to take from the railroads all except enough to keep them running and to run them in the interest of the public entirely.

"The original investors in railroads in this country who invested their money to develop it were anxiously given charters for a nominal sum to build and operate railroads. In addition, the State has, in the past, relieved them of taxation. Municipalities and individuals have given them rights of way and other valuable donations in order to induce these investors—known then as railroad companies, but now as octopii—to put their money into the hazardous undertaking of building railroads in an undeveloped country, which they well knew would hardly support it until time and energy developed

the country through which it was built. Therefore they accepted in good faith those charters and donations and built for the future. Other investors have bought lands for farming and for lumbering and other purposes, while others have bought real estate at town sites, making their investments at the same time the railroad investor made his.

"The farmer who gave \$5 for his land now finds it worth \$25. The man who invested in the city lot for \$1000 finds it now worth \$10,000. The farmer who bought the farm which has advanced from \$5 to \$25 per acre has a net profit of \$20 per acre in United States money. The city investor who bought the town site finds he has a profit of \$9000 in United States money. The people are willing to say that these men were wise investors; that their profit is legitimate and right, and I say so, too, but how has the railroad investor fared who furnished the foundation and made possible the investment of the farmer and real estate owner in the city? His profit has turned to water and he has no right, under the present policy, to accept a compensation that would give him more than 5 or 6 per cent. on the original investment, while the development brought about by his own investment, time and energy is given to others. * * * The policy of the State is now that a railroad must not make more than 5 per cent. on the value of its property, and that value shall be fixed by what it would cost now to lay the track, build the depots and buy the rolling stock. It is contended that that represents the value of the road, when any reasonable man knows that it has taken more than 40 years to build the Central Railroad and its business, and that it could not be duplicated in two or three years, which would be required to build the track and structures.

"It is also the policy of the State in taxing the railroads, if the property seems to be worth more than the securities amount to, that the taxes shall be assessed on the value of the property; or if the securities are greater than the actual value, then the State insists upon the assessment based on the securities. (I cite you to the Wrightsville & Tennille Railway and the Southern Railway for comparison.)

"If a railroad, fortunately situated, builds up a large business and its profits shall increase above the 5 or 6 per cent. in its earnings on the investment, it is a signal for immediate reduction of its rates, and the increase of its taxes, not because its charges are unreasonable, but because it can stand it. On the other hand, when a different railroad, even though as well managed, has not enough business to earn this 5 or 6 per cent. on its investment, the State demands that it shall compete with the more favored line in hauling freight at the same price on the ground that the people cannot be responsible for the bad judgment in building through a poor country, and its not having sufficient business to warrant competition with the more favored line. The State also holds to the policy of taxing the franchise for the privilege of operating that unfortunate road which has become a burden to the owner and a loss also. The State now feels that it made a mistake years ago in relieving one or two railroads of certain taxes on the property, done at the time to induce the construction of the road. Now it goes into the courts, and so far as it can repudiates its former contract and attempts to collect taxes upon property which it had agreed years ago not to do.

"If the policy of the State when these railroads were built was as it is now, the railroad investors would have no right to complain, but they invested their money in good faith and have expected the State

to continue its good faith with them, which we all know it has not done.

"The State receives for its own railroad, which cost about \$29,000 per mile, an interest of 7 per cent. on a valuation of \$45,000 per mile, and the betterments, which amount to several hundred thousand dollars. There is no other railroad located in the State that pays its owners so well.

"I do not believe that those people who are charged at present with the management of the State's affairs would advocate a reduction of income for this road to a 5 per cent. basis on its cost. I am sure I would not want it, nor do I believe the people would sanction such a policy, yet the State demands the same of other investors in railroads in Georgia.

"At the time this lease was made the lessee was allowed a compensation of three cents per mile for carrying passengers. In the year 1907 this compensation was reduced 33 1/3 per cent., when it was clearly shown by the management that it cost more money to give the service than it had ever cost before. At the same time the State demands the full amount of the rental under its contract, justifying its position that the business had increased, which the lessee had a right to expect when he made the lease, and the further fact that a clause in the lease gave them a right to reduce the road's earnings. The lessee, no doubt, in accepting a contract with this clause, had unbounded confidence in the fair dealing of the people of Georgia, and was not expecting to be caught by sharp practices, which are now seized upon and taken advantage of by political demagogues for their selfish interests, and to the disgrace of the honorable people of Georgia.

"I find frequent expressions in the public press advocating letting up on the railroads for a while; in other words, keep the hook out of the bait for a while until such a time when the suckers begin to bite freely, and then bring forward the old tax-raising rate-making hook again and take them in.

"If I am not mistaken, you will find the investors slow to invest in property to be operated by the public, and for the public. If the State must have full control of property to operate it in the interest of the public, who are composed of the shippers and users of railroads, then the State and the shippers may build their own roads. In my judgment, the State will have to recede considerably from its present policy and quality of regulation; that we will have to have a commission limited and not a commission unlimited; that its power to take charge of private property for public use must be clearly defined, and that future contracts between the State and railroad investors will have to be different from those of the past, or we must have government ownership of railroads. We must choose between the two."

It Was Predicted.

[Hartford (Conn.) *Courant*.]

At present the country has a bureau of education; it is in the Department of the Interior, and Commissioner Elmer E. Brown is the man in charge. Mr. Stephenson of Wisconsin has been persuaded by some person or persons unknown that the country needs a department of education and a secretary of education, the latter to sit in the President's Cabinet and advise him about his politics. Day before yesterday, in the Senate, Mr. Stephenson introduced a bill to bring about these changes. He is the veteran Marinette lumberman (78 on his last birthday) who befriended Mr. La Follette in other years and was helped into the Senate by that grateful reformer when John C. Spooner took his hat and quit.

The bill which Mr. Stephenson intro-

duced Tuesday afternoon was predicted by the late Allen G. Thurman of Ohio more than a third of a century ago. To be exact, it was foretold on March 6, 1872. Speaking in the Senate that day, Thurman said:

"The next thing is to have the Commissioner of Agriculture turned into a Cabinet officer, and then to have a minister of public instruction, as they have in France. This little bureau of education is to grow up into a department of the Government—the department of public instruction—and we are to have another Cabinet officer there. Already there are petitions on our table praying for a department of commerce, and that is to grow up into a department of the Government and another Cabinet officer—the minister of commerce, as he is called in France—and so on. Where is it to end?"

Thurman was an American of the old school. He had a large-sized conviction that too much governing at Washington wouldn't be healthy for this very much spread out country; that the regulating and administering of a great many things should be left to the States and to the people. He didn't "think nationally," in a word. We haven't a doubt Mr. Beveridge thinks the Stephenson bill fine; it wouldn't surprise us any to learn that he had something to do with its introduction. Probably it will commend itself to a host of "educators." Mr. Ogden and other philanthropists may be expected to smile upon it. Very likely it has received the approval of Mr. Carnegie. As for that learned member of the New York bar who was urging a while ago for the supervision and regulation of the public schools in all the States from Washington, the Stephenson bill must seem in his eyes an answer to prayer.

To the *Courant's* eyes it looks like faddish folly, with possibilities of mischief in it. The country no more needs a secretary of education than it needs a secretary of pharmacy. There are quite enough executive departments at Washington already.

JOINING SCIENCE AND NATURE.

Improvement in Ore and Coke Handling Needed.

Editor *Manufacturers' Record*:

The questions that have recently been discussed in the pages of the *MANUFACTURERS' RECORD* in relation to the Southern iron business lead one pretty far afield. They cover ore occurrence and production, smelting, transportation, labor conditions, rates of interest on money, etc. Without professing the ability to throw any new light on any of these matters, I beg to offer some suggestions that a long acquaintance with Southern conditions has forced upon my attention.

In regard to the ores. It is not so much a question of ore supply as of ore preparation. It may be taken as granted that the supply of ore is ample for all practical purposes, and that furnaces now in blast or ready to go in, should the market improve, need not find themselves short of ore. I say need not, but as a matter of fact some of them have not always had all the good ore that they could have used. This is a general proposition, and applies to other parts of the country also, although, perhaps, not so evidently.

In Alabama, which is now and is likely to remain the chief iron-producing region of the South, it is becoming apparent with every year that better stock and more uniform stock is demanded. I doubt if anywhere in the South the proper attention has been given to improving the quality of the ore that is sent to the furnaces, and I am sure that no such attention has been given in Alabama. I do not know that the blast furnace men have been entirely to blame in this matter, but their skirts

are not clear, for if they had stood out for better ore they could have secured it. The greater part of the ore used in Alabama is mined by the companies themselves; they mine the ore and send it to their own furnaces. The objections to the ore, on the part of the blast-furnace managers and superintendents, go in to the central office and are there disposed of. Complaints cannot be followed by requests to accept the ore or by other penalties attached to the shipment of poor material. The furnace man uses such stock as is sent to him, and he must use it, for it is sent in by his superior officers. If he refuses to use it he soon leaves the employment of the company and gives place to someone who will make the most of the circumstances.

While there is plenty of ore in Alabama, it cannot be denied that we have seen the last of the very cheap iron. The advantages which Alabama has enjoyed in the supply of cheap ore are passing away, and we are rapidly approaching the time when a closer attention must be given to methods of mining and treatment and to mechanical appliances for handling the raw materials and the products. In other words, we have depended long enough upon what Nature has done, and must now do something ourselves. The advantages which Nature has bestowed upon us will always be an asset of a certain value, but unless they are supplemented by the skill and industry and ingenuity of man they will become of less and less importance. To use a common expression, we have worked the natural advantages racket about long enough, and we have seen Alabama decline in the relative production of pig-iron from 10 per cent. to 6 per cent. Up to a certain point natural advantages play a most important part in the industrial development of any region, but beyond this Nature seems to step aside and say, in effect, "it is up to you."

During the five years ending with 1906 there were required in Alabama 2.47 tons of ore per ton of pig-iron produced, and for the five years ending with 1894 2.45 tons. These periods are 12 years apart, and yet there has been practically no change in the situation. This would seem to indicate a considerable uniformity in the stock, and it also indicates that we are satisfied to go along pretty much as we did 12 years ago. During this period there has been a notable decrease in the iron contents of the Lake ores, but this has been offset by the most efficient methods of handling material that can now be seen in the world.

I believe that furnace practice in Alabama, taking every circumstance into consideration, is as good as it is anywhere in the country. In so far as concerns the future of the iron industry in Alabama, the furnace practice will be able to give an excellent account of itself. The weak points are in the preparation of the stock before it reaches the furnace, and methods of handling it from the stockhouse to the furnace. We must have better ore, better coke and better methods of charging the furnaces and disposing of the products. I believe that the development in Alabama will be along these lines, and that the progress and stability of the iron industry here will depend upon these factors. There is no lack of ore, there is no lack of coal that makes a good coke, but there is a lack of serious and unremitting attention given to improving what we have.

WM. B. PHILLIPS.

Birmingham, Ala.

The latest publication of the Board of Agriculture of West Virginia contains the report of the annual meetings of the Sheep Breeders and Wool Growers' Association and the West Virginia Live Stock Association.

CURRENT EVENTS AS VIEWED BY OTHERS

DANGERS IN OPPORTUNITIES.

[Dallas News.]

Statistics show that, with an area of 5.9 per cent. of that of the entire world and a population of 5.2 per cent. of the world's people, the United States is producing 78.8 per cent. of the entire corn product, 73.1 per cent. of the cotton and 20.7 per cent. of wheat. Other percentages of United States productivity in proportion to the world's output are: Tobacco, 31.1; pig-iron, 42.2; petroleum, 62.5; copper, 57.5; gold, 22.1; silver, 54.4; railroad mileage, 39.5. The figures are taken from an article by Richard H. Edmonds, editor of the *MANUFACTURERS' RECORD*, in the May number of the *Review of Reviews*. At the beginning of this century, less than nine years ago, we were producing 34 per cent. of the world's iron, as against 42.2 per cent. now; 42.9 per cent. of petroleum, as against 62.5 per cent. at present; 55.5 per cent. of copper, as compared with 57.5 per cent. today; less than one-half of 1 per cent. of the world's sulphur, as compared with 35.8 per cent. now.

The wonderland in which we live is indeed "Nature's storehouse of wealth," and there are many reasons why the American people should feel grateful that their lot should have been cast in a new and resourceful region rather than in a bony waste like Arabia or any icy region like Russia. Of course, the opportunities of the main in a rich, prosperous and progressive country are much greater than the chances of the man in a land of poverty and oppression. While the opportunities are greater in the new and prosperous land, so are the responsibilities. "Where much is given much is required," and nothing tends to miseducate men and women more than opportunity and opulence. In considering of the many talents we have, it is wise to consider also of the duties and dangers that always come with such fortune.

Easy wealth is apt to educate men and women away from that sort of industry, economy and care that are necessary to keep hand, heart and head busy. Extravagance is most dangerous because of the moral looseness of it. Educate men and women to have everything they desire, and they are quite sure to conform to desires that are selfish and vicious, and few mortals who are brought up in the school of abundance and prodigality will ever be able to hold their own against the graduates of the schools of the better kind.

Native Americans, miseducated as many of them are, will not be prepared to compete with Chinese or Japanese in the chosen lines of the Mongolians. But the inability to keep up will not stop there. All the countries of Europe save France are now pouring into this country many thousands of people, trained not only in the Old World's school of economy and industry, but in many cases in the best technical schools in Europe. The natural wealth and numerous opportunities of our own country have enabled the native American to escape most of the severe tests that such competitors would bring upon him, but the means of escape may be cut off more and more from this time on.

The marvelous resources of which we boast, the incomputable wealth of the country, summarized by Mr. Edmonds, and the easy opportunities by which many of us have been spoiled and miseducated—these are the very allurements that are now bringing into the country competitors trained in the school of hard experience, who bid fair to get the better of us, or of

our children, as the country begins to fill up. There is, therefore, an element of danger even in the wonderful resources and wealth of the country, and the only way to eliminate this danger is to change the miseducation of the people into an education that is more practical, and that will enable Americans to withstand the dangers that come of opulence, extravagance, ease, indolence and the many costly vices and dangers that have always accompanied them.

CONSERVING FUELS.

[New York Sun.]

Authorized to test the fuels owned by or for the use of the Government itself, the United States Geological Survey has made a number of discoveries of the greatest importance to the entire people. At the Government's fuel-testing plant it has been shown that the gas engine is capable of generating from two and a half to three times as much power using a given amount of coal as can be obtained from a steam engine. This means, it is declared, that a 600-horse-power gas engine will save \$5000 a year in its coal bill over the same power steam engine, and that the saving on a 6000-horse-power gas engine ought to amount to \$72,000 a year.

The gas engine has also opened the way for the use of millions of tons of low-grade fuel, much of which has heretofore been thrown away as useless. The tests have shown that coals practically valueless under steam boilers because of their high percentages of impurities have generated sufficient power in the gas engine to render them of high commercial value. Coals as high in ash as 45 per cent. have been used successfully in the gas engine.

In the West, where the supply of high-grade coal is inadequate, the low-grade lignites (the poorest form of coal) of North Dakota developed as much power when converted into producer gas as did the best West Virginia bituminous coals when used under the boiler of a steam engine.

To the West this discovery of the Government scientists is of the utmost importance. It makes possible the introduction of cheap power and therefore the establishment of an industrial empire of immense proportions. There are many million acres of lignites in the West, an almost inexhaustible supply of fuel that has so far been practically useless, the people being compelled to send a great distance for their coal and pay big freight charges on what they did use.

In the average steam engine today but 5 per cent. of the coal energy is transformed into work. In the gas engine this percentage of efficiency is 12½ per cent. The coal used in generating power in the United States last year amounted to about 300,000,000 tons. With the universal use of the gas engine it is estimated that at least 100,000,000 tons of this coal could be saved.

In testing the efficiency of coals under the boiler of a steam engine the survey engineers suggest still another way to save the fuel. Recent experiments indicate that boilers ought to perform two or three times the work they do now. In New York city a certain large corporation has almost doubled the capacity of its power plant by placing furnaces in the rear of its boilers as well as the front. This was done at a saving of several hundred thousand dollars, as it would have been necessary to purchase additional

land held at a high figure to carry on the work.

The tests of different coals under the steam boiler at the Government plant have also shown the possibility of increasing the general efficiency of hand-fired boilers 10 to 15 per cent. over ordinary commercial results.

The survey is also engaged in a general analysis of the coals of the country. These analyses have resulted in the Government purchasing coal on definite specifications based upon its heating value. Under this system a better grade of coal and coal better adapted to the types of furnaces in the Government buildings has been obtained without any increase in cost, which in itself is a saving to the Government. These investigations, by suggesting changes in equipment and methods, are also indicating the practicality of the Government's purchasing cheaper fuels, such as bituminous coal and the smaller sizes of anthracite, instead of the more expensive sizes. With new boilers in the heating plant of the State, War and Navy Building in Washington \$15,000 is now being saved each year in the coal bill for this building alone. Many power plants are now buying fuel on specifications, and have obtained increased efficiency as a result of the Government's investigations. These tests of the coal will aid manufacturers, wherever situated, to save money in the purchase of coal, for they will enable them to learn where they can buy coal that is best suited to their purpose.

The Government has found still another way of conserving the fuel resources in the briquetting of coal. The investigations show that in the near future the great quantities of waste coal seen about every mine and the low-grade coal that is now being left in the mines will be utilized in the generating of power and for locomotive power and domestic heating. Successful tests of briquettes were recently made on two railroads. The briquettes, which were made from the slack of high-grade bituminous coal, showed an economy of 20 per cent. over the same lump coal, not taking into consideration the cost of making the briquettes.

At the Government fuel-testing plant at Denver, Col., investigations into the washing and coking of coal have been carried on for a year with much success. In the washery plant it has been shown that coals were greatly improved by washing at the nominal cost of from 3 to 10 cents a ton. In recent experiments the experts have succeeded in making coke out of several coals that have been regarded as non-coking. Of 37 samples tested from the Rocky mountain region all but three produced good coke, though a number of these were considered non-coking coals. When the metallurgical interests of the West are noted the importance of these investigations will be realized.

RESTORATION OF WATERWAYS.

[Wall Street Journal.]

Unless all signs fail, our great rivers are again to be restored to something of their pristine glory as commercial highways. Originally they made the settling of the continent possible. Then, for more than half a century, thanks to cheap land and the decreasing cost of iron and steel, the railroads appeared to be the only means which could cope with the rapid progress of the nation in population and productive power.

The return of the faith of the country in its rivers is due to the rapid growth in industrial, financial and agricultural power of the country, compared with a more or less slow growth of new transportation mileage. The average increase of railway mileage in 10 years from 1897 to 1907 was about 4500 miles a year. The story of growth in that and other respects is told by comparisons below:

	1897.	1907.	Inc. P.C.
Railroads, miles.....	184,000	230,000	24.0
Railway capital.....	\$10,635,000,000	\$15,000,000,000	41.0
Population (est.)	71,000,000	85,000,000	20.0
Manufactures (estimated).....	\$12,000,000,000	\$15,000,000,000	25.0
Exports.....	\$1,051,000,000	\$1,881,000,000	79.0
Imports.....	\$764,000,000	\$1,434,000,000	87.7
Lumber cut (est.)	\$400,000,000	\$700,000,000	75.0
Mineral output	\$617,000,000	\$1,902,000,000	194.0
Farm products	\$3,500,000,000	\$7,000,000,000	100.0
Soo canal freight, tons.	18,983,000	58,217,000	206.6

*1906.

These comparisons suggest in various forms the more rapid growth of commodities entering into traffic than in traffic facilities as expressed either in railway mileage or in railway capital. Railroads with proper exceptions have found difficulty in obtaining the necessary capital for development of facilities. For the time being, at least, from whatever cause or causes, this situation has a direct bearing upon the restoration of waterways. This is one side of the general transportation problem.

The other side involves the turning away from private investment in railroads to the use of public funds in waterways. If the public is unwilling to supply adequate resources for increasing the business capacity of transportation by land under corporate auspices, it does not seem to hesitate at the other plan of putting many more millions annually into the restoration and improvement of its natural waterways.

Whether in the long run the application of public funds to navigation will be wiser than to put an equal amount into railway improvement from private sources still remains to be seen. Probably no complete answer can ever be worked out. But the chances are that, with the growth of business power indicated above, the time will come when private capital for inland transportation will see that restoration of waterways has only enlarged the opportunities of the railroads and made the field of investment all the more inviting.

HOMES FOR MILLIONS.

[Troy Times.]

It appears from the map in question that the total area of swamp lands in the United States is 119,972 square miles, and of this, the great bulk may be readily put into tillable condition. William E. Curtis, the noted and observant writer, has been looking up the matter with his usual carefulness, and presents some conclusions that deserve earnest consideration just now. He finds that of the swamp lands in the States and Territories, at least 78,473,000 acres can be redeemed. The Geological Survey has actually made maps of 7,500,000 acres, and thorough investigation has shown that most of this can be turned to account. Nearly every State and Territory is represented in the exhibit. Florida has the largest swamp area, with more than 18,000,000 acres; Louisiana has 9,500,000; Mississippi, 6,000,000; Michigan, nearly 5,000,000; Arkansas, nearly 6,000,000; Wisconsin, 3,000,000; Illinois, Georgia, Maine, North Carolina and Texas, about 2,500,000 each; Missouri and South Carolina, about 2,000,000 each, while Alabama, California, New

York and Virginia have more than 1,000,000 each, and other States smaller areas. From what has been shown it is estimated that the lands capable of being reclaimed from an excess of moisture and turned to profitable account agriculturally would support easily 10,000,000 persons and would be worth from \$3,000,000,000 to \$5,000,000,000. The economic side of the proposition should need no further elucidation.

KENTUCKY CANNERIES.

[Louisville Courier-Journal.]

Reports received by the Commissioner of Agriculture show that the canning business in Kentucky is becoming a large and important factor in the business of the State, and 19 cities and towns now have factories in which fruit and vegetables are preserved and prepared for the market. Canning factories are located at the following places: Augusta, Owensboro, Brownsville, Bonnierville, Nortonville, Monterey, Campbellsville, Dover, Dixon, Dycusburg, Morton's Gap, Frankfort, Grant, Rowletts, Henderson, Hardinsburg, Kingsville, Louisa, Bowling Green, Sebree, Stanton, Salvisa, Wickliffe, Worthville, Burgin, Pleasureville, McBrayer, Wheatley and Central City. Creameries are located at the following places: Louisville, Bloomfield, Shelbyville, Beard, Bowling Green, Lancaster, Independence, Buffalo, Beaver Dam, Crittenden, Christiansburg, Campbellsville, Corinth, Dry Ridge, Danville, Dover, Eminence, Glasgow, Hodgenville, Hebron, Elizabethtown, Jefferson-town, Lagrange, Leitchfield, Paint Lick, Perryville, Paris, Princeton, Sulphur, Sadieville, Stanford, Somerset, Taylorsville, Versailles, Waddy, Springfield, Wilmore, Williamstown, Warsaw, and articles of incorporation are being filed monthly for creameries at other places, showing that this industry is rapidly becoming more and more popular and profitable in this State.

Harvie Jordan's New Compress Company.

The Farmers' Gin-Compress & Cotton Co. has been organized at Memphis, Tenn., with Harvie Jordan, president of the Southern Cotton Association, as president. This company has absorbed the Farmers' Compress Construction Co. of Philadelphia, and will be the operating company. The press owned by this company, which has heretofore been illustrated in the MANUFACTURERS' RECORD, is designed to make a square bale of 500 pounds at the gin, with the density now secured by the large compresses, with a view to doing away with recompressing. The necessity of compression at the gin has been actively urged by leading cotton authorities and by cotton conventions in this country and abroad for some years. Its importance in the saving of unnecessary handling and freight is so great that the wonder is that the old system has continued in operation so long. For some years Mr. Jordan has been a very active advocate of improved cotton-handling methods, and with his very wide acquaintanceship throughout the cotton world he will doubtless be able to command for the company of which he has accepted the presidency wide co-operation from planters, shippers and consumers.

An Industrial Section.

With its issue of May 28 the *Commercial-Appeal* of Memphis, Tenn., presents an industrial section containing interesting business announcements of some of the leading firms of that city. The section, it is announced, will be a feature of the *Commercial-Appeal* during the summer, and the descriptive reading data will be changed until all branches of business in Memphis are discussed.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ON THE VIRGINIAN.

Capacity of the Road and Progress Toward Completion Officially Described.

In connection with the recent note issue of the Tidewater Company, it is announced that "the line of the Virginian Railway from Deepwater, W. Va., on the Kanawha river, to Princeton, near the Virginia boundary, about 92 miles, passes directly through the Pocahontas-New River coal fields. At Princeton will be located assembling yards, from which place to the terminals at Sewalls Point, near Norfolk, Va., 350 miles, the grade is practically all in the direction of the haul, there being only one exception of nine miles, upon which the grade is but six-tenths of 1 per cent., or about 30 feet to the mile. Over this nine-mile section an assisting engine will be used, which will enable the company to take an unbroken train of 80 loaded 50-ton coal cars from Princeton to the Atlantic ocean with a single locomotive.

"Construction is in accordance with the most approved standards, with steel rails, minimum weight of 85 pounds per yard, and stone ballast. The two drawbridges over the Elizabeth river at Norfolk are heavy double-track steel structures operated by electricity, and on the West Virginia division a number of structures are built for double tracks at places where it is known that the additional track will be first required. Concrete and cast-iron pipe culverts have been used under all heavy banks, and the steel bridges and viaducts are designed for the heaviest weight which they can possibly be required to sustain.

"From the commencement of construction the work has been prosecuted with all possible energy and dispatch consistent with economical and lasting results. The grading and tunneling have been completed upon 95 per cent., and rails laid upon about 75 per cent. of the total mileage. About one-half of the line (a portion at each end) is now in operation. Practically all the steel work for the connection of the railway and a large portion of that required for the coal pier is all ready for erection. It is expected that the entire line will be in operation before May 1, 1909."

OPEN TO BIRMINGHAM.

Illinois Central Operating Over Its New Route—A Celebration.

The Illinois Central Railroad Co., which several weeks ago began the operation of freight trains to and from Birmingham, Ala., has now begun the operation of passenger trains to and from that city over its new line via Jackson, Tenn.; Corinth, Miss.; Haleyville and Jasper, Ala. The entrance of the first passenger train into the terminal at Birmingham was celebrated on May 30 by a public demonstration, including speechmaking and a banquet, which was attended by city officials, business men and officers of railroads. A number of the principal operating and traffic officials of the Illinois Central were present, and there were several officers from the Mobile & Ohio Railroad, which on June 15 will also begin operating trains over the same route.

This new line is composed of parts of the Mobile & Ohio, the Illinois Central, the Southern and the St. Louis & San Francisco railroads. To make it possible, however, the building of a connecting link 80 miles long from Corinth, Miss., to Haleyville, Ala., was done by the Illinois Central, which in the operation of its

trains uses the Mobile & Ohio track from Jackson, Tenn., to Corinth. Running thence over its own tracks to Haleyville, Ala., it then follows the Southern tracks to Jasper, Ala., where it enters upon the Frisco tracks, which take it to Birmingham. In that city the Illinois Central has built commodious terminals, and is now handling business, both freight and passenger. According to the announced schedule, travelers can leave Birmingham at 2 P. M. and reach Chicago at 11.30 A. M. next day. Returning, they can leave Chicago at 6 P. M. and arrive at Birmingham next day at 3.15 P. M. Trains will run solid between Birmingham and Jackson, Tenn., but sleeping cars will go through without change.

Railroads Heavy Losers by Floods.

The recent floods in Texas, according to a report from Galveston, were the most destructive to the railroads of any in the history of the State. The companies, it is said, estimate their total damage at from \$10,000,000 to \$12,000,000. It is said that there were altogether 420 miles of track washed out, this, of course, being distributed at various points. There were 30 bridges destroyed and more than 40 damaged. Fifteen locomotives were wrecked and 30 damaged. Serious loss also occurred to freight cars, freight depots and other buildings of the companies. It is further stated that the roads have placed orders for 2,000,000 new ties, 5,000,000 feet of bridge timbers and 480 tons of bridge steel.

In Oklahoma the floods were also very severe, many washouts occurring and serious delays ensuing to the movement of traffic, as in Texas. On some lines traffic was completely tied up for several days, but in a number of instances where it was possible to do so trains were gotten through by detouring over other lines.

The experience of the Burr's Ferry, Brownell & Chester Railway, which is owned by J. H. Kirby of Houston and associates, illustrates the severe character of the floods in Texas. The line was under water from almost one end to the other, and at the Neches river bridge, which is 25 feet above the normal water-level, the stream rose so high that it reached the floors of some cars loaded with granite, which were placed upon the bridge to prevent it from being swept away. The stream is 200 feet wide, with high banks on each side. A comparatively small part of this line has been in operation, but its construction was being pushed as rapidly as possible until the floods came. It is to be completed for the purpose of hauling lumber and other freight to Beaumont.

Pennsylvania's Statement.

The Pennsylvania Railroad Co. has issued a comparison of earnings and expenses for April, 1908, with the same month of last year as follows: Lines directly operated, gross earnings, decrease \$2,848,500; net earnings, decrease \$663,900. For the four months ended April 30, comparison being made with the same period of last year, gross earnings, decrease \$8,676,500; net earnings, decrease \$2,214,600. On the lines west of Pittsburgh and Erie, directly operated, for April gross earnings decreased \$2,553,600; net earnings, decrease \$784,500. For the four months ended April 30 gross earnings decreased \$6,863,000; net earnings, decrease \$1,515,200.

The Philadelphia, Baltimore & Washington Railroad Co. makes the following comparison of earnings and expenses for April, 1908, with the same month of last year: Gross earnings, decrease \$96,100; net earnings, increase \$43,700, there having been a decrease of \$139,800 in expenses. The comparison for the four

months ended April 30 with the same period of 1907 shows gross earnings, decrease \$271,800; net earnings, increase \$120,000, the decrease in expenses having been \$391,800.

The Northern Central Railway Co. reports comparison of earnings and expenses for April, 1908, with April, 1907, thus: Gross earnings, decrease \$159,600; expenses, decrease \$147,600; net earnings, decrease \$12,000. For the four months ended April 30, as compared with the same period of last year, gross earnings, decrease \$507,600; expenses, decrease \$483,600; net earnings, decrease \$24,000.

Will Open Up Timber and Coal.

The Tombigbee Valley Railroad has begun operating its trains in and out of Mobile, Ala., by connection with the Southern Railway tracks at Calvert, Ala., 35 miles north of Mobile.

The Tombigbee Valley Railroad is now 60 miles long from Calvert to Silas, Ala. It runs for a considerable distance through timber land of pine and hardwood. There are about 16 stations, and it is intended to continue building the line northward through Choctaw and Sumter counties to connect with the Alabama, Tennessee & Northern Railroad, which is also owned by Messrs. J. T. and W. G. Cochrane.

This latter line now extends from Cochrane northward to Reform, Ala., connecting there with the Mobile & Ohio Railroad. It is to be extended into Walker county, when it will furnish a direct north and south line from the Alabama coal fields to deep water.

The Tombigbee Valley Railroad already has a deep-water terminal at Nannahubba Bluffs, three miles from Calvert, where it handles timber and lumber for shipment by water.

John T. Cochrane is president of the railroad, and W. G. Cochrane is vice-president.

Frederick to Emmitsburg.

The Washington, Frederick & Gettysburg Railway Co., Frederick, Md., which has just let a contract to J. E. McDonough & Co. to build a three-and-one-half-mile extension from Lewistown to Catocin Furnace, Md., informs the MANUFACTURERS' RECORD that it is expected that the entire line from Frederick to Emmitsburg, Md., about 22 miles, will be completed this year. At Catocin Furnace the road will connect with the Monocacy Valley Railroad from that point to Thurmont, and which will be absorbed as part of the through route. This will leave about seven miles to build from Thurmont to Emmitsburg. At present the line is 10 miles long from Frederick to Lewistown, with a total of 11 miles of track. It is standard gauge, with 70-pound rails. It has four motor cars for passengers and four freight cars, one snow plow and two other vehicles. D. Columbus Kemp of Frederick is president.

Atlanta to Macon and Albany.

President W. J. Massee of the Atlanta, Griffin & Macon Electric Railway Co. and the Macon, Americus & Albany Electric Railway Co., which propose to build inter-urban lines connecting the various Georgia cities named, is reported as saying that construction will be started on both lines immediately, as the Railroad Commission has approved the plans for the financing of the roads. The president applied for permission to issue \$5,000,000 of common stock and \$5,000,000 in bonds for each of the two companies, and the charters are to be amended for that purpose.

Mr. Massee is further quoted as saying that upon the completion of the line cars will run between Atlanta and Macon on a two-hour schedule, with current furnished

from the plants of the Central Georgia Power Co., which are now being built on the Okmulgee river and the Flint river. The two roads will have about 200 miles of track.

CINCINNATI TO THE SEA.

Reported Incorporation for a Line Through Kentucky and South Carolina.

The Cincinnati, Kentucky & Virginia Railroad Co., incorporated under the laws of North Dakota, has also filed incorporation papers in Kentucky to build a line from Cincinnati, Ohio, to Charleston, S. C., about 500 miles. Robert Winn of Mt. Sterling, Ky., represents the company.

The Guthrie & Interurban Railway Co. of Guthrie, Okla., capital \$100,000, has been chartered to build a five-mile line from Guthrie to a point on the Cimarron river at an estimated cost of \$20,000 per mile. The incorporators are C. R. Renfro, F. E. Houghton, G. Crow and R. E. Overton of Guthrie, Okla., and E. C. Brown of St. Louis, Mo.

Appointed.

An official letter to the MANUFACTURERS' RECORD announces the appointment of T. B. Redmond of Atlanta, Ga., as general manager of the Washington, Westminster & Gettysburg Railroad Co., and also as assistant to the president, who is James B. Colegrove of Washington, D. C. President Colegrove writes that Mr. Redmond's appointment came about through a notice in the MANUFACTURERS' RECORD that he desired an associate in the building of the proposed line from Washington, D. C., to Gettysburg, Pa. He also says that Mr. Redmond has the highest endorsements, and has been in railroad construction over 30 years. He has built 2000 miles of line.

New Equipment.

The Colorado Southern Railroad Co. has ordered 13 locomotives from the American Locomotive Co., which will be built at the Richmond works. Ten of the engines will be of the consolidation type and three will be switchers.

The Georgia Railway & Electric Co. has recently completed at its own shops in Atlanta 18 trolley cars for use on its lines.

The Illinois Central Railroad Co., it is reported, has given a large order for steel rails to the Tennessee Coal & Iron Co. They will weigh 90 pounds to the yard.

Natural Gas in Power-House.

The Fairmont & Clarksburg Traction Co., operating an electric line from Fairmont to Clarksburg, W. Va., 30 miles, uses natural gas as fuel in its power-house at Jayenne, although it is in the midst of a coal country and the president and vice-president of the line are prominent coal operators. The use of natural gas, it is said, is inexpensive, and there is no cost for removing ashes. If there should be a failure of the gas supply it would be easy to substitute coal.

South & Western Bonds Approved.

The Carolina, Clinchfield & Ohio Railroad's stockholders are reported to have approved the issue of \$15,000,000 of 5 per cent. 30-year bonds. The line is to be completed this year from Dante, Va., to Bostie, N. C., and by July 1 of next year from Bostie to Spartanburg, S. C. There will be \$5,000,000 of the bonds reserved for extensions, improvements and betterments. This was formerly called the South & Western Railway.

Railroad Notes.

The Atlanta, Birmingham & Atlantic Railroad is reported to have reached Bes-

semer, Ala., with its grading forces, and will complete the line into Birmingham as rapidly as possible.

According to a dispatch from Pauls Valley, Okla., the Oklahoma Central Railway has been put in the hands of a receiver. The line is 132 miles long from Lehigh to Chickasha, Okla.

W. E. D. Stokes, according to a report from New York, has been elected president of the Chesapeake Western Railway Co., in which he recently acquired an interest. A. H. Gleason was elected vice-president.

The Norfolk & Western Railway has completed a new double-track rolling-lift bridge over the east branch of the Elizabeth river. The bridge is 160 feet long, and when raised gives a clear waterway of 140 feet.

Clarence F. Norment has been elected president of the Washington Railway & Electric Co. of Washington, D. C.; Ward Thoron, first vice-president; George H. Harries, second vice-president, and Allan L. McDermott, special counsel.

The Aberdeen & Tombigbee Valley Railway, which is building a line in Mississippi, has also been incorporated in Alabama for a short section of line to Pickensville, just over the boundary. It is rumored that the Illinois Central Railroad is interested.

The Louisville & Nashville Railroad Co. has double-tracked its line from Boyles, near Birmingham, Ala., to Calera, Ala., about 32 miles, excepting one and one-quarter miles around Brock's mountain, where a tunnel three-quarters of a mile long is being built.

An official circular has been issued making formal announcement of the recent death of Mr. William J. Murphy, vice-president of the Cincinnati, New Orleans & Texas Pacific Railway Co. and the Alabama Great Southern Railroad Co., which occurred May 10, after about 10 days' illness from paralysis.

Officers of the Seaboard Air Line recently visited Tampa, Fla., to inspect the site for the proposed deep-water terminals. The party included the receivers of the road, and they also looked over the site for the terminals of the Tampa Northern Railroad. W. A. Garrett, president of the Seaboard, but now chief executive officer for the receivers, is reported as saying that the visit to Tampa had no particular significance excepting that it was such as any trunk-line officers might make in looking over possibilities for development and expansion.

Immigration Notes.

It is estimated that 500 families from Northern States are prospering at farming in Madison county, Mississippi.

Hon. G. W. Koerner, Commissioner of Agriculture and Immigration of Virginia, was visited this week by a gentleman who wishes to buy at least 5000 acres of trucking land in the tidewater section of the State.

Plans are making to settle immigrants from Germany and Switzerland on a tract of 100,000 acres of land 60 miles from San Antonio, Texas.

About 85,000 acres of land near Carters and Auburndale, Fla., will be cut into small tracts for immigrants from the Middle States.

The Commercial Club of Bronson, Texas, has elected Messrs. W. B. Stille, president; J. W. Lewis, C. E. Casey, J. T. Lightfoot, vice-presidents; S. L. Moore, secretary, and J. B. King, treasurer.

According to the *Commercial-Appeal* of Memphis, Tenn., about \$1,500,000 will be expended in the neighborhood of that city in river improvement.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

The Simpsonville Cotton Mills.

The Simpsonville (S. C.) Cotton Mills buildings will soon be completed, the brick being completed ready for the window frames. This company's main building will be one story high, 128 feet 4 inches by 296 feet 8 inches, with monitor roof, and there will also be a wing 43 feet 4 inches by 84 feet. In March last the MANUFACTURERS' RECORD stated particulars of the Simpsonville company's organization and plans for building a plant of 8000 spindles and 200 looms to manufacture print cloth and employ about 150 operatives. Messrs. G. H. Cutting & Co. of Worcester, Mass., are the contractors for the building, and J. E. Serrine of Greenville, S. C., is the architect-engineer in charge. All contracts have been awarded for machinery. The company is capitalized at \$150,000, and E. F. Woodside is president.

Caswell Cotton Mills.

The Caswell Cotton Mills of Kinston, N. C., will be completed about July 15 in accordance with the plans previously reported by the MANUFACTURERS' RECORD. The company's main building will cost about \$20,000, and will be equipped with 5400 spindles and accompanying machinery for manufacturing 20s to 24s hosiery yarns. Contracts have been placed for all the machinery, the textile equipment being furnished by the Howard & Bullough American Machine Co. of Pawtucket, R. I. In addition to the mill, the Caswell company will erect 14 operatives' cottages. The company will expend about \$120,000 for the plant. J. E. Hood is president and F. C. Dunn treasurer.

The Erwin Mill at Cooleemee.

The Erwin Cotton Mills Co. of West Durham, N. C., has about completed the rebuilding of its picker-house at Cooleemee, N. C., the building having been destroyed by fire recently. This reconstruction was erroneously referred to in April as the Cooleemee Cotton Mills, whereas the Erwin corporation purchased that plant last year and the Cooleemee corporation was dissolved. Contract for the building was awarded to the J. F. Gallivan Building Co. of Greenville, S. C., and J. E. Serrine of Greenville, S. C., was the engineer in charge. It is understood that the machinery contracts have been awarded.

The Atlanta Hosiery Mills.

The Atlanta (Ga.) Hosiery Mills has about completed its building to replace burned structure, and will begin manufacturing next week. Operations will begin with 110 knitting machines and loopers, ribbers, etc., to match, driven by electric power, with a daily capacity of 700 dozen pairs of hose. A steam plant will be used for heating and dyeing. The company has space to increase to a daily output of 1200 dozen pairs, and will increase as conditions justify. It was mentioned recently by the MANUFACTURERS' RECORD.

Completed an Addition.

The Manetta Mills of Lando, S. C., has completed its three-story 100x125-foot addition, which has been in course of construction for several months, and will equip the building with machinery for

carding, spinning and weaving. It is reported the company will at once arrange for building another addition.

Wants Sash Cord.

Glen Morris Supply Co., Glen Morris, Md., wants addresses of manufacturers of sash cords and rope.

Textile Notes.

It is reported that H. K. Edgerton of Lebanon, Tenn., is planning the organization of his proposed company, previously mentioned, for manufacturing woolen goods.

The United Woolen Mills Co. of Parkersburg, W. Va., mentioned several weeks ago, has expended about \$10,000 to remodel a building for its purposes. But this company does not manufacture woolen cloth, its output being woolen clothing.

COTTONSEED

Georgia Crushers.

The Georgia Cottonseed Crushers' Association will have its annual meeting at Atlantic Beach, Fla., June 8 and 9, when addresses will be made by Dr. Andrew M. Soule on "Relation of Cottonseed to the Economic Development of the South;" by S. T. Carter of Augusta, on "Suggestions of Improved Methods in Gathering Raw Materials;" by Dr. Charles Hertig, professor of chemistry, University of North Carolina, on "A Simple Method for Determining Oil in Cottonseed Products;" by Hon. B. H. Rawls, chief of the Bureau of Animal Industry, Washington, D. C., on "The True Feeding Value of Cottonseed Meal and Hulls," and others.

Oil Mill Superintendents.

Among the speakers at the fifteenth annual convention of the Oil Mill Superintendents at Galveston on June 4-6 will be Messrs. C. N. Thatcher, Thomas Bell, W. H. Emerson, Robert F. Hetherington, A. A. Diffey, H. J. J. Theisson, George T. Parkhouse, F. P. Morris, M. W. Faherty, Paul Watson, C. M. Graham, N. T. Blackwell and Mrs. C. B. Newberry.

Transforming New Orleans.

Half-tone illustrations in the sixteenth semi-annual report of the Sewerage and Water Board of New Orleans enable one to obtain some idea of the vast work of municipal improvement that has already transformed New Orleans. They include views of the pumphouse, in which are being installed high-lift and low-lift pumps, electric generators and dynamos, boilers and mechanical stokers and superheaters and coal bunkers and economizers; the Algiers sewer outlet cut through the levee; sewer outfall pipe; intake pipes, clear-water concrete reservoirs in process of construction and a panoramic picture showing progress of work on the water purification station during the past six months. Three valuable maps are also published with the report. One shows the drainage system, and indicates what portions have been or are being constructed. Another shows the main sewers, sub-mains and force mains and the several pumping stations, and the third shows the water-distribution system, with site of the stations and intakes and the mains and pipes exceeding 12 inches designed to serve the entire present area of the city. Legends on the maps enable one to mark at a glance the progress already made upon these improvements.

F. L. Sherwood, proprietor of a summer hotel near Van Buren, Ark., is reported as saying that he has about completed arrangements to operate an automobile line from Fort Smith through Van Buren to his resort.

MINING

Louisiana Limestone.

[Special Cor. Manufacturers' Record.]
New Orleans, La., May 30.

As the preliminary step in the development of the mineral property known as the Marble Quarry in Winn parish of this State, the Southern Mineral & Land Improvement Co., organized in New Orleans nearly a quarter of a century ago, will soon invite bids for the construction of a five-mile railroad that will connect its valuable property with the four roads now having terminals at Winnfield, La. It is proposed to make a preliminary investment of about \$100,000 in this property, and to increase this amount from time to time as the situation justifies. J. F. Coleman, a well-known local engineer, with headquarters in the Hibernia Bank Building, is in charge of the scheme. The Southern Mineral & Land Improvement Co. is backed almost entirely by local capital. Capt. I. L. Lyons of this city is president, and other members of the board of directors are R. M. Walmsley, president of the Canal-Louisiana Bank & Trust Co.; Charles C. Carroll, a well-known lawyer; Warren Kearny, head of the firm of J. Watts Kearny's Sons; Gustaf R. Westfeldt, vice-president of the Hibernia Bank & Trust Co., and others. The property which it now proposes to develop was bought some years ago with a large quantity of other land, including timber and other holdings. The company invested extensively in Winn parish, and of all the property it bought has still left intact the 1700 acres, where stands the place known familiarly as the Marble Quarry. It is five miles west of Winnfield, and is declared by experts to be one of the most valuable mineral properties in Louisiana.

At the marble quarry there are said to be extensive deposits of limestone which looks not unlike marble. It is the intention of the company to crush the first rock quarried and dispose of it as crushed rock for making concrete, for ballasting and for macadam roads. When the operations have extended deeper into the deposits stone will be quarried in building sizes. On the same property there are also deposits of shale, which may be used in conjunction with limestone in the manufacture of high-grade Portland cement.

To Develop West Virginia Lands.

The Gauley River Timber & Coal Co. of Greensburg, Pa., has incorporated with a capital stock of \$100,000 to develop coal and mineral lands in Jefferson district of Nicholas county, West Virginia. Incorporators of the company include Messrs. J. E. Newcomer and E. H. Wolf of Monessen, Pa.; D. J. Snyder and J. R. Smith of Greensburg, Pa., and C. C. Smith of Scottsdale, Pa.

Maryland Geological Survey.

Every piece of literature coming from the Maryland Geological Survey is practical proof of the great value of the Survey to the State of Maryland. The latest is almost a handbook of Maryland. It has four parts. The first is a report on the physical features, embracing physiography, geology, mineral resources, agricultural soils, climate, hydrography, terrestrial magnetism and forestry. This was prepared by Dr. William Bullock Clark, State Geologist, and Dr. Edward B. Matthews, in collaboration with George B. Shattuck, Charles K. Swartz, J. A. Bonsteel, F. H. Newell, Cleveland Abbe, Jr., O. L. Fassig, L. A. Bauer and W. D. Sterrett. It carries with it a new geological and agricultural soil map. Part II is an account by Dr. Clark of the exhibits made by the Survey at Buffalo, Charleston, St. Louis and Annapolis. Part III is the fourth report

on the Maryland highways, by Highway Engineer A. N. Johnson. Part IV is the first report on State highway construction by Chief Engineer Walter W. Crosby, and Part V is a historical account of the counties of Maryland, their origin, boundaries and election districts. A series of maps with this part is one of the interesting illustrated features of the work.

To Operate Many Coke Ovens.

A report from Bristol, Tenn.-Va., states that the Stonega Coal & Coke Co. of Stonega, Va., has about completed repair work on 150 coke ovens, and will begin full operations within a few days. It is the purpose of the company, it is said, to put in operation 1000 coke ovens and operate them continuously in the future.

To Increase Operations.

It is announced that the Alabama White Marble Co. of Gannett Quarry, Ala., will expend about \$150,000 for enlarging the sawing and finishing plants at its quarries, and for the purchase of new equipment. The telegraph office of the company is at Sylacauga, Ala., and its construction work is in charge of John Stephen Sewell.

It is understood that the coal mines of Arkansas, which suspended operations several months ago on account of a strike, have resumed work.

Profit in Waste Places.

Many poor soils, now waste spots on the farm, would become profitable if planted with the right kind of forest trees and cared for in the right way. Trees will often grow where grain and grass will not. Swamps, stony ridges, exhausted fields and washed hillides need not be abandoned. There is money in most of them if they are set to work producing wood lots and forests. But knowledge and judgment are necessary, and a bad guess may be costly.

Many trees do well in their soils—cone-bearing trees in particular. The farmer is fortunate whose land has no poor spots. Few landowners are so well off. Fertile acres are usually fairly profitable, but the gravel bars, rocky knolls, marshy swales and exhausted and eroded slopes are not. Scarcely one of them need remain unproductive. They will grow timber—pine, locust, poplar, osage orange, oak, chestnut or some other kind. But the soil must be studied and the species selected to suit it. Failure might follow the planting of walnut on soil suited to white pine, or vice versa.

Studies of various regions and trees that suit them have been made by the Forest Service at Washington. Results and conclusions have been published, and may be had for the asking. The aim of these studies has been to point out how the farm's waste and neglected corners may be turned into wood lots where the farmer may grow his own posts, poles, fences and saw logs.

It is decidedly worth while to keep all of the farm at work. The owner pays taxes on all his land, and is out of pocket for whatever is not earning him something. Further, by growing a tree crop on land which is too poor to plow the quality of the land itself is improved. Forests add humus to the soil, bettering its character, and it has lately been discovered that the decaying leaf litter has also the power of gathering from the air a certain amount of nitrogen, the most important of plant foods. In this respect the forest does for the soil what leguminous crops, like clover and alfalfa, do. Wood growing on worn-out land thus becomes doubly profitable. The land is made useful and improved at the same time.

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LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

San Antonio's Building.

Reviewing the extensive building operations in progress at San Antonio, Texas, the *Daily Express* of that city presents a compilation by J. H. Kirkpatrick which shows that more than \$8,000,000 is being expended at this time for new buildings alone, while street improvements and other public work amount to several hundred thousand dollars. Among the more important buildings under construction or contemplated may be mentioned the enlargement of the brigade post at Fort Sam Houston to cost about \$3,000,000; a hotel to be erected on Houston street at a cost of \$1,000,000; hotel under construction on Travis Park to cost \$500,000; office building on Houston street and Alamo Plaza to cost \$250,000; depot for International & Great Northern Railroad to cost \$200,000; remodeling Maverick Bank building at a cost of \$200,000; enlargement of the Federal building at a cost of \$150,000; Presbyterian church to cost \$75,000; Stowers' block to cost \$200,000; McDaniel block to cost \$75,000; freight depot for Southern Pacific Railway to cost \$50,000; addition to Hot Wells Hotel to cost \$100,000; enlargement of St. Louis College to cost \$80,000, together with a number of other structures of less importance. In addition, it is stated that residences and small business houses will represent an expenditure of \$500,000, beside new school buildings to cost \$260,000, and Houston street improvements to be made by the city, traction, telephone and telegraph companies at a cost of about \$200,000.

Lumber Exchange for Birmingham.

The Building Material Men's Exchange of Jefferson county, Alabama, including in its membership lumbermen, dealers in building material, etc., has been organized at Birmingham for the purpose of promoting the general interests of Jefferson county, and particularly to encourage, advance and protect its building and manufacturing interests. The following officers have been elected: President, H. H. Snell of Lathrop Lumber Co.; first vice-president, W. A. Currie of Moore & Handley Hardware Co.; second vice-president, L. L. Stephenson of Jefferson Brick Supply Co.; treasurer, J. H. Eddy of Paul Lumber Co.; board of governors, Allen J. Krebs of Krebs Lumber Co., Frank T. Richardson of Birmingham Paint & Glass Co., Gus Colvin of Alabama Supply Co., W. E. Wailes of Wood-Dickerson Lumber Co., W. W. Sneed of Carolina Portland Cement Co. It is intended to elect a permanent secretary, who will devote his whole attention to the work of the exchange.

Buys Timber for Pulp.

Regarding a reported purchase of timber lands in West Virginia for \$435,000, the West Virginia Pulp & Paper Co., main office 309 Broadway, New York, advises the MANUFACTURERS' RECORD that it has bought about 30,000 acres in Pocahontas, Randolph and Webster counties. The property adjoins a boundary of about 100,000 acres which the company already owns, and was bought to supply its large pulp and paper mills at Covington, Va.; Piedmont and Davis, W. Va., and Luke, Md. It is thought that the timber now secured will assure a supply for at least 30 years. The lands are also underlain with a good quality of bituminous coal, but it is not the intention of the company to develop this or make further extensions to its pulp and paper plants. Officers of the

company are Messrs. John G. Luke, president; David L. Luke, vice-president, and Adam K. Luke, treasurer.

To Conserve Georgia Timber.

An important step in the general movement to bring many of the rich stands of timber in the South under a scientific plan of forest management is the offer made by the school of forestry of the University of Georgia at Athens, Ga., to furnish timber owners experts who will examine and report upon any of the forests in the State. The object of the offer is to collect information in regard to the forest resources of the State, to spread a knowledge of forestry and to improve forest conditions. The forest school will furnish the experts free, and the only expense which will be borne by the forest owner will be paid for the traveling and subsistence expenses of the expert while making the examination. In cases where several owners of the same locality apply the expenses will be prorated.

To Dredge for Sunken Logs.

For the purpose of dredging sawmill streams in the vicinity of New Orleans, La., and in adjacent territory, with a view to recovering sunken logs, the Amalgamated Construction Co. of New Orleans has recently incorporated. It is stated that nearly all streams in the vicinity of sawmills contain sunken logs, lumbermen estimating that hundreds of thousands of dollars' worth of logs have been lost since the beginning of timber operations in that section. Among the incorporators of the company are Messrs. W. Osgood Orton, Frank G. Conklin, Henry V. Mielly, Dudley M. Shively and S. M. Robinson, all of New Orleans.

Wants Cypress Lumber.

A mill company manufacturing doors, moldings and trim in South Carolina wants bids on its requirements of cypress lumber for a specified period. Address H. W. C. M., care of the MANUFACTURERS' RECORD.

It is reported that a company will probably be organized at Tampa, Fla., for the purpose of establishing a lumber trade between that city and Honduras.

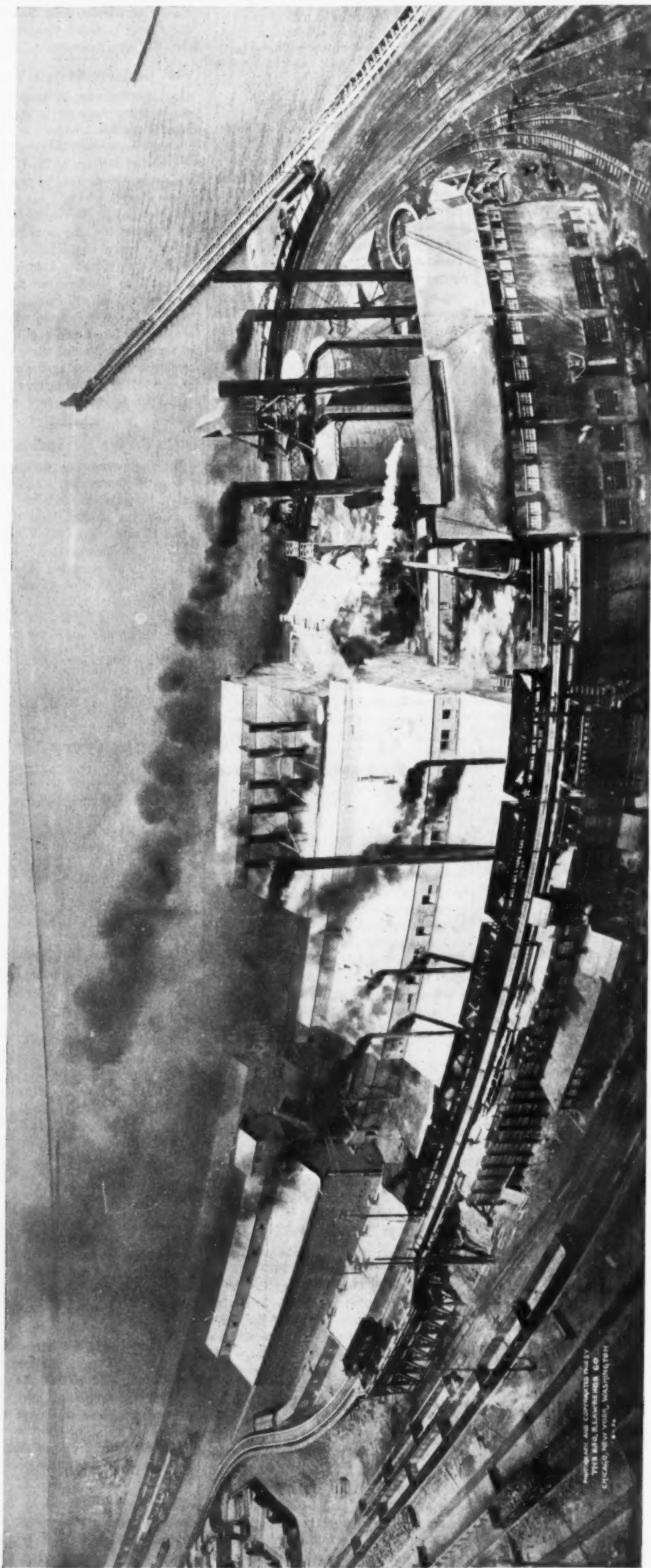
Municipal Improvements.

Mr. James D. Macfarlane, secretary of the Board of Bond Trustees of West Tampa, Fla., writes to the MANUFACTURERS' RECORD:

"The city of West Tampa is about to issue bonds aggregating \$180,000 to be used for the following purposes: \$100,000 for street improvements, \$40,000 for water extension, \$20,000 for sewer extension and \$20,000 for park purposes. This money will be available about September 1, and will be expended under the supervision of the Board of Bond Trustees, composed of A. L. Cuesta, John H. Drew and James D. Macfarlane."

James M. Sweeney, Mayor of El Paso, Texas, writes to the MANUFACTURERS' RECORD that "the people of this city have voted a bond issue of \$500,000 for the following purposes, to wit: \$100,000 for the erection of additional school buildings; \$100,000 for street and alley grading purposes; \$200,000 for street-paving purposes; \$50,000 for a sanitary sewage-disposal plant, and \$50,000 for garbage-disposal plant. The bonds have not yet been disposed of. The transcript for same is now in the hands of the Attorney-General at Austin, Texas, and as soon as he approves same bids will then be asked for the bonds."

Mr. Harry W. Neepier has become associated with Messrs. J. S. Wilson, Jr., & Co., bankers, Calvert Building, Baltimore, as bond salesman.



UNIVERSAL PORTLAND CEMENT CO.'S PLANT NO. 2, SOUTH CHICAGO, ILL.

MECHANICAL

New Reinforced Concrete Testing Machine.

In connection with the important tests which are made from time to time on the results of reinforced concrete work by the University of Illinois, it is interesting to note that the engineering experiment station of the university has just received from the Purdue University a large impact machine which will be used in the future to test reinforced concrete beams. This machine, which is considered the best of its kind now made, was designed by Prof. William K. Hatt of the civil engineering department and Prof. W. P. Turner of the mechanical engineering department of Purdue University, and was built in the shops of the university. There are only three similar machines in the country, one at Purdue University, one at Illinois University, and one in California.

The machine, which weighs about 8000 pounds, will be used in testing reinforced concrete beams and arches, and specimens eight feet long can be tested with 50, 100, 250 and 500-pound weights dropped from a height of six feet. The weights are dropped by means of an ironclad magnet, which when the current is turned attracts and holds the weight until it reaches the desired height, when the current is turned off and the weight drops.

The engineering experiment station of the University of Illinois, which has contributed valuable information concerning the results of reinforced concrete work, is conducted by Arthur N. Talbot, professor of municipal and sanitary engineering, and in charge of theoretical and applied mechanics, and this information is always published in pamphlet form for distribution to those interested.

Universal Portland Cement Co.'s Plants.

The two photographic views herewith are of the Western plants of the Universal Portland Cement Co. of Chicago and Pittsburg. Plant No. 2, located at South Chicago, Ill., at the mouth of the Calumet river and Lake Michigan, was started in May, 1900, and has been in continuous operation ever since. It has six kilns, 60x7½ feet, with a daily output of 1500 barrels of Universal Portland cement.

Plants Nos. 3 and 4 are at Buffington, Ind., 22 miles from Chicago, near Lake Michigan. These plants are located on the Chicago, Lake Shore & Eastern Railway, which connects all of the roads running out of Chicago. The plants adjoin each other and practically form one large plant, although they were built at different times and are operated separately.

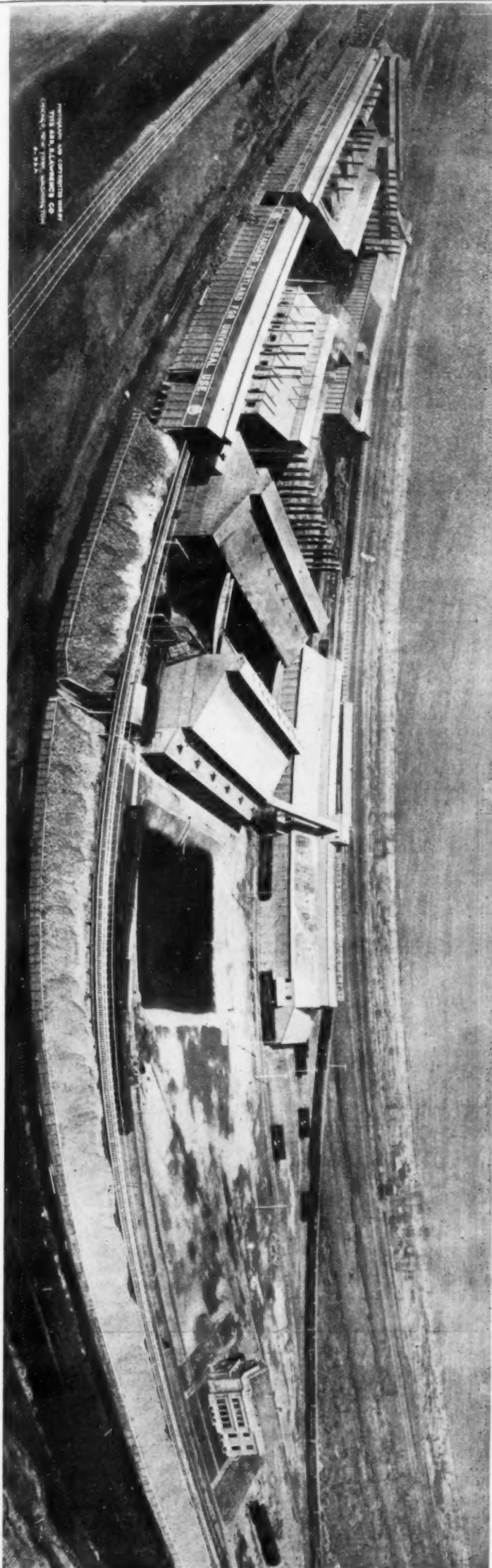
Plant No. 3, in the foreground, was built in 1904 and started on January 1, 1905. It contains 16 kilns, 90x7 feet, and has a daily output of 5000 barrels of Universal Portland cement. The stockhouse has storage room for 310,000 barrels.

Plant No. 4 was started on October 27, 1907. It contains 12 kilns, 120x7½ feet, and has a daily output of 6000 barrels of Universal Portland cement. The stockhouse is one of the largest in the country, being 560x100 feet, and holds 400,000 barrels.

Both plants are operated entirely by electric power generated by waste gases from the blast furnaces of the Illinois Steel Co. at South Chicago, and transmitted by means of high-tension alternating current, which is transformed at the plants for distribution.

These views were made by the George R. Lawrence Company, 274-278 Wabash avenue, Chicago, Ill., with its aerial photographic apparatus.

This is composed of a series of aero-



UNIVERSAL PORTLAND CEMENT CO.'S PLANTS NOS. 3 AND 4, BUFFINGTON, IND.

planes, by means of which is elevated to the necessary height the controlling device by which the camera is held rigid in the air during the time the exposure is being made, and the electrical device for making the exposure.

The aeroplanes are each eight feet square, and have a wind surface of 60 square feet. It is usual in making exposures at an altitude of 1000 feet to use from 12 to 18 of them. They are sent up one after another, dragging a cable until the lifting strength is strong enough to carry the combined weight of 3000 feet of cable and the camera with its series of weight and electrical appliances.

When the camera is 1000 feet high, the top aeroplane is 3000 feet high—practically out of sight. The lowering apparatus is operated by three-horse-power gasoline motor. The man who makes the picture remains on the ground and watches the camera with a strong field glass, while not for a moment must he take his eye from the apparatus high above. He has his finger upon a switch, which controls the electrical device for making the exposure. It may require one, two or three hours to convince him that the right moment has arrived to press the button. The instant the shutter is released a miniature parachute escapes from the apparatus, notifying the operator that the exposure has been completed, and that the apparatus can be lowered and be prepared for another ascent if necessary.

Improved Cop and Butt Winder.

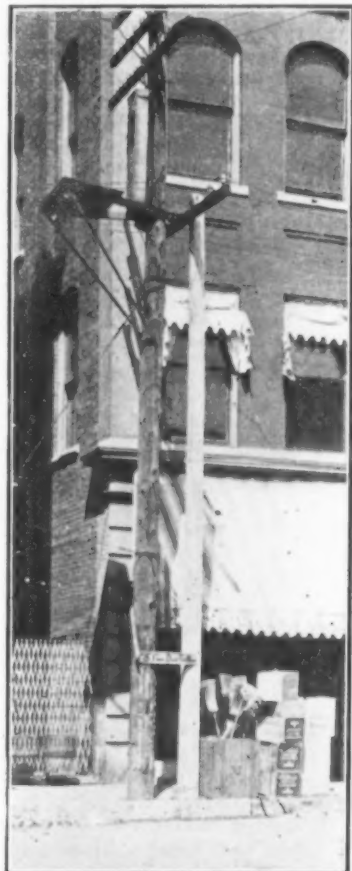
Cotton manufacturers will find their attention attracted to the accompanying view of an improved cop and butt winder for the production of the filling for the looms. Cops are wound solid, without any core, and butts have only a small butt head in one end to hold the filling in the shuttle. The winding is effected at a high rate of speed, and it is claimed into each cop is put about 30 per cent. more yarn than do other devices, thus increasing production per spindle of winder and decreasing cost to produce filling per pound. Referring to this winder, the manufacturers say:

"As our filling will put so much more yarn into the shuttle, the loom will make 30 per cent. less stops for replenishing, and thus increase production, and as the weaver will have just so many less stops to make of the loom, he or she can attend

Messrs. F. A. Lazenby & Co., Bush and Wicomico streets, Baltimore, Md., manufacture the machine.

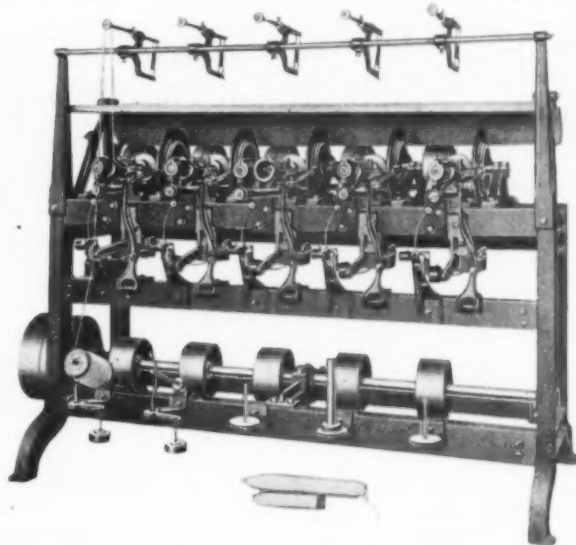
Reinforced Concrete Telegraph Poles

The constantly-increasing uses of cement in some form or another emphasize the possibilities of this material; in fact, there does not seem to be any branch of construction work where a cement product



REINFORCED-CONCRETE TELEGRAPH POLE.

cannot be used as a substitute and give equal or better satisfaction, and often at less cost. One of the latest purposes to which cement has been applied with success has been that of making telegraph poles. These poles have a skeleton of steel, and are made with a hollow interior, and consequently are no heavier than the ordinary wooden pole, while they are



IMPROVED COP AND BUTT WINDER.

to just so many more looms, and the looms running continuously produce better cloth. The results are fewer attendants for the looms and an increased production from the looms, and fewer spindles of the winder required to furnish filling for looms, and last, but not least, better quality of cloth."

much more substantial and have a more pleasing appearance. Reinforced concrete poles have so many advantages over the wooden pole in the way of stability, durability and ultimate economy that there is every reason why they should have a widespread adoption. The concrete pole illustrated herewith gives one an idea of

its general appearance and other advantages as compared with the wooden pole, one of which is shown immediately adjoining it. This pole and the method of constructing it is the invention of F. H. Tidnam, manager of the Oklahoma Gas & Electric Co., Oklahoma City, Okla., and the Hollow Concrete Pole Co., 817 South Robinson street, Oklahoma City, Okla., has been formed to introduce it.

Modern Brick and Tile Machinery.

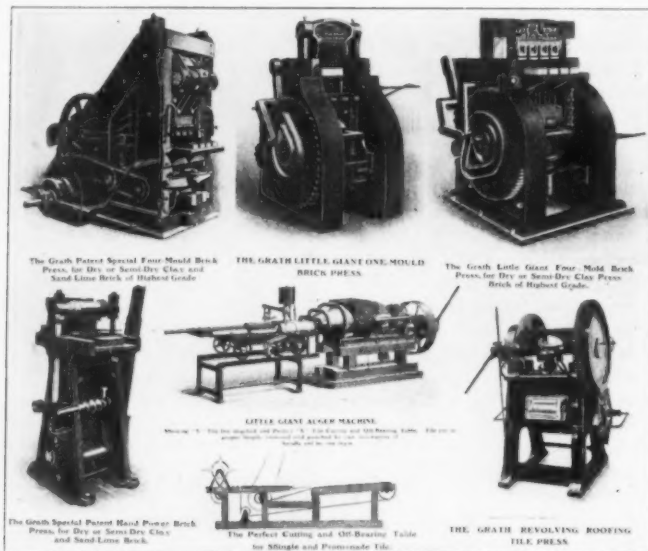
Those who are interested in modern brick and tile machinery will notice the accom-

an auger machine and a cutting and off-bearing table.

The machinery of the Illinois Supply Co. has been well known for a number of years, and is well adapted to the production of dry press brick, dry clay or sand-lime brick and roofing tile, for all of which there is large demand. Walter P. Grath is the company's president.

Ogle Patent Octagon Screen.

The Ogle patent octagon screen, illustrated herewith, is for all kinds of dry materials.



MODERN BRICK AND TILE MACHINERY.

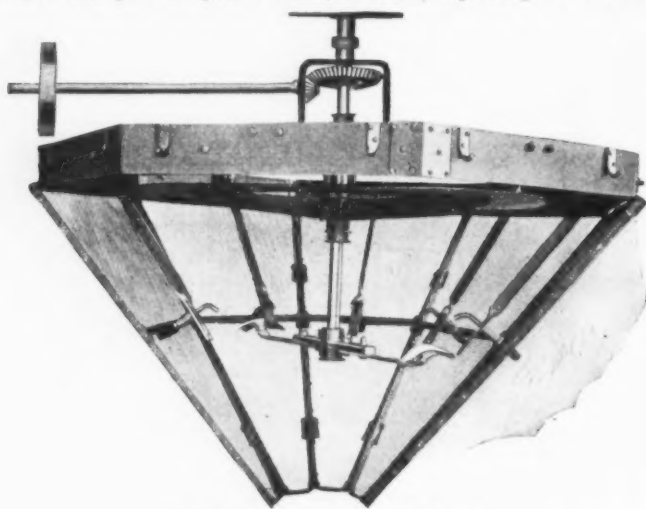
panying seven views of such equipment. The machines are manufactured by the Illinois Supply Co., 512-513 Holland Building, St. Louis, Mo.

The heaviest machine is the Grath patent special press. Another is the Little Giant press. Both are of the four-mold type, and each is particularly well adapted to the work for which it is intended. The Little Giant, while a good press in every respect, is somewhat lighter and costs less than the other. The one-mold brick press is for fine, careful work and fancy faces. Two men working it can produce from

The screen proper is in eight sectional trays hung to top frame by iron straps and hooks, and can be interchanged in a very short time while screen is in motion.

Trays are fastened at bottom near outlet by clamp straps so arranged they can be removed and trays unhooked from frame.

Disk is a circular steel plate fastened to cast-iron spider attached to shaft. In its velocity and centrifugal motion the material falling on disk from four different spouts is distributed equally over surface of screen, separating the fine material



OGLE PATENT OCTAGON SCREEN.

5000 to 6000 bricks per day. One illustration shows the Grath patent special hand-power machine. There are many cases where it is advisable to use hand power, and this press is capable of excellent service. Another illustration shows the revolving roofing-tile press. It is equipped with five sets of molds, and is operated by two men. One of them applies the material to the face of the mold while the other takes the molded tile from the machine, and the two men are kept working just as fast as the machine can revolve. The other two illustrations show

from the coarse. In order to get a great capacity the disk must be kept full of material.

Wire cloth used on this screen is of a coarser mesh, owing to angle screen is hung, to produce a greater quantity of finished goods, and wears longer than finer wire.

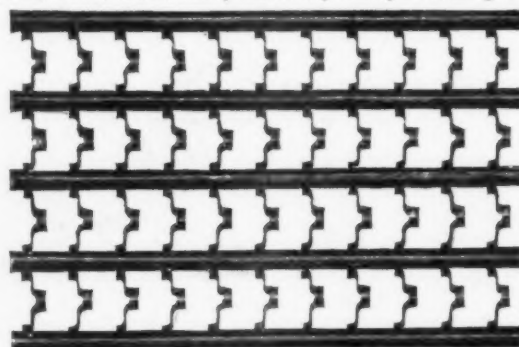
Elevator feeding this screen should not have less than 12x7-inch buckets every 16 inches, at a speed of not less than 35 to 45 revolutions per minute.

This screen is offered as without vibration, running very light, driven with a

four-inch belt, and has 85 square feet of screening surface. Messrs. Walker & Elliott of Wilmington, Del., manufacture the Ogle screen.

The Rib-Lath.

A metal lath which appeals at once to the practical builder is the rib-lath illustrated herewith, and manufactured by the



THE RIB-LATH.

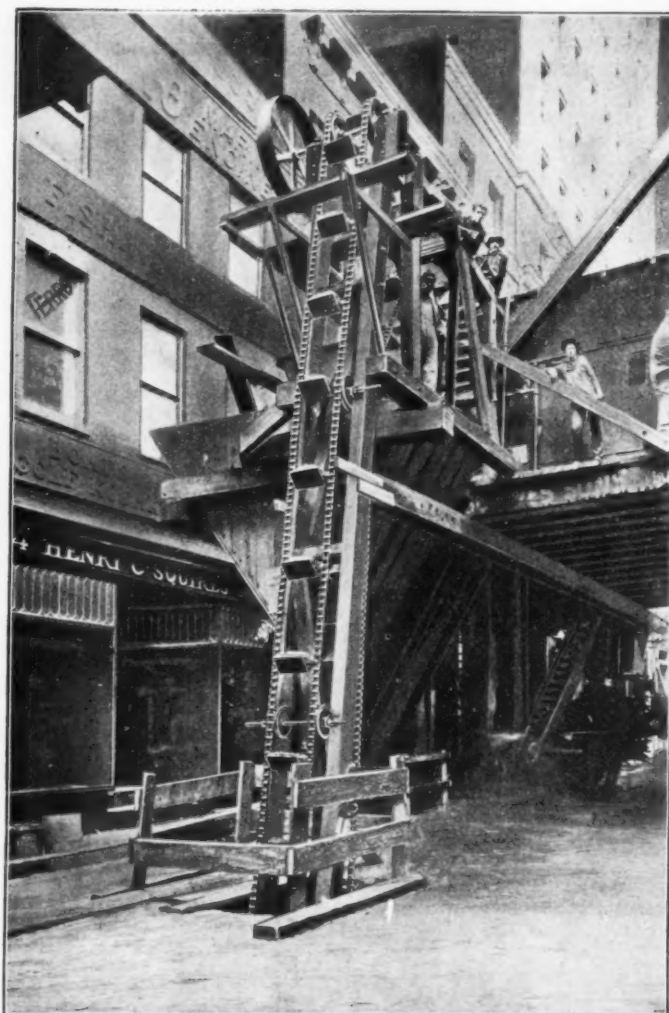
Trussed Concrete Steel Co. of Detroit, Mich.

Rib-lath takes its name from the characteristic feature of its design, namely, parallel ribs rigidly connected by means of spacers, which at the same time serve to give the desired clinch or key for the plaster. The general appearance of rib-lath is not easily described, but it is clearly shown in the accompanying illustration.

Bishop Schools in Detroit, and scores of other buildings throughout the country, and has the endorsement of many plasterers, building contractors and architects.

A Link-Chain Belt Installation.

An accompanying illustration presents a view of one of the Link Chain Belt Co.'s many conveyors hauling sand and gravel.



A LINK-CHAIN BELT INSTALLATION.

It is made with various thicknesses of metal and ribs of varying strength, the strength being increased by a greater amount of metal being used in the ribs and by increasing the corrugation or depth of bead.

Rib-lath is in no sense an experiment, having been used on such important structures as the eight-story reinforced concrete Stambaugh office building at Youngstown, Ohio; the St. Francis Home and

The chain used is the Clouser high-speed detachable link, 3 inches in width and 3 1/2-inch P. made of crucible steel, with side attachments riveted to No. 10 steel-gauge buckets, right angle 14x7. Eighty feet of this conveyor is under ground. The sand and mud is hauled from the tubes in cars to the foot of elevator and dumped into a steel boot.

The elevator is running at a speed of 50 R. P. M. on 20-inch sprockets, which

is 250 feet per minute. The buckets are spaced 20 inches apart, with a capacity of 15 pounds each per bucket, making a load of 150 buckets of wet clay per minute passing the head sprockets which are discharged, thus making a total of 60 cubic yards per hour and running continually at 24 hours per day, making a maximum of 1440 cubic yards in 24 hours' running.

This high rate of travel is due to the special design of chain.

This is but one of many different propositions met by the Link Chain Belt Co. of 52 Dey street, New York. The company

Christopher visited the North to arrange for materials. While on this trip he consulted with the Turner Construction Co., 11 Broadway, New York city, and after studying its methods (as exemplified in over 200 completed contracts) awarded it the contract for his building.

After a quick trip to Jacksonville by the contractor's general superintendent and an inspection of the building site and investigation into methods of obtaining and handling materials there it was decided to buy the 1800 tons of crushed stone from crushers in the Highlands of

ings are of reinforced concrete. The front is arranged so that each panel between the columns is composed of doors eight feet high, with a transom, giving a total clearance of approximately 12 feet. These doors are designed to be removed and plate-glass show windows substituted when desired. This arrangement of the first floor makes possible the utilization of this building for small stores. Behind each store provision is made for freight lifts seven feet square, and in all there will be 10. Through the center of the building, parallel with the short side, is a 10-foot

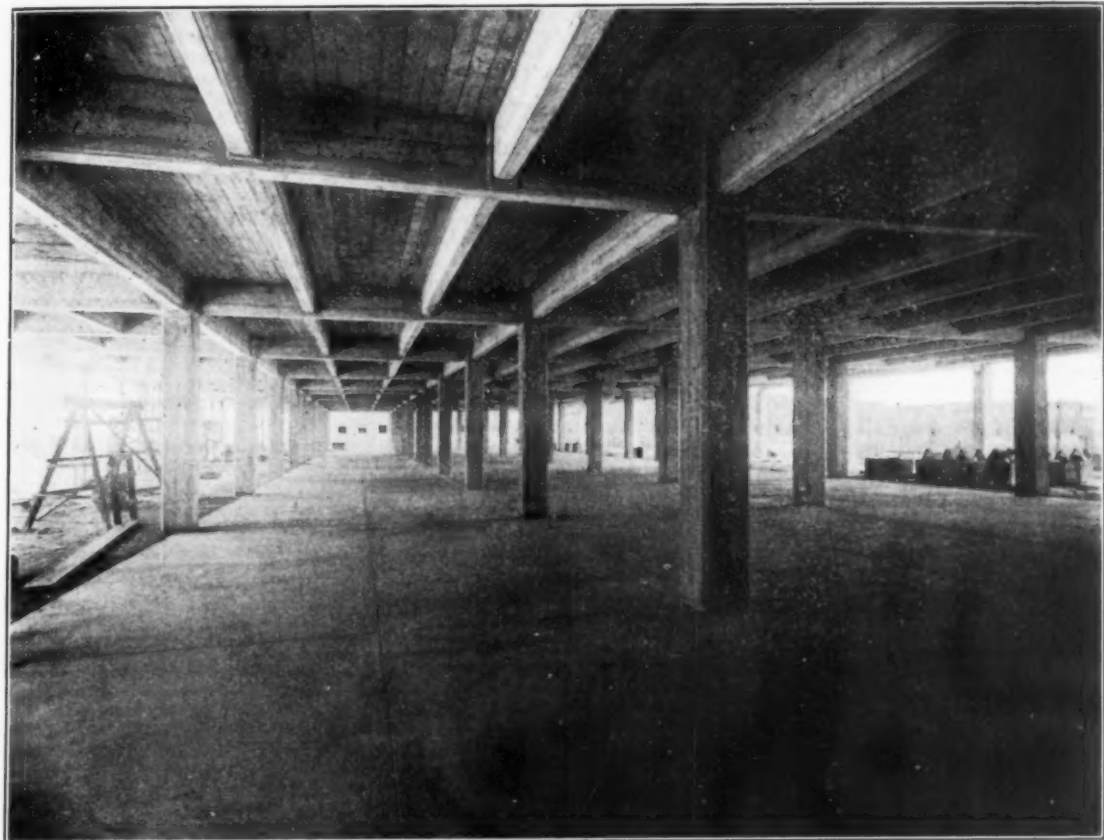
rior, while the smaller shows how the reinforcement for one of the footings was constructed.

The plant for constructing this building consisted of a No. 3 Ransome mixer and a standard Ransome bucket and tower with Lidgerwood hoist. Power was furnished by a 35-horse-power electric motor. In addition there was installed a sawmill, circular saw and boring machines operated by a 15-horse-power motor. All material was received at the upper street level and handled largely by gravity to the first floor level, at which the mixer was set.

So well pleased was Mr. Christopher with this building that he decided to erect a similar structure exclusively for the J. G. Christopher Company, and recently awarded contract to the Turner Construction Co. for a warehouse 105x105 feet, of reinforced concrete construction, with one room 60x105 feet without a post in it for handling pipe, and to facilitate this handling an overhead trolley system will be installed. Another room will be used for storing bar iron and steel on end, and will hold 700 cars of material. Another compartment will be devoted to sheet steel, while on the second floor (which is to be built to carry one ton to the square foot) railroad spikes, nails, etc., will be stored.

Mr. Christopher has also just awarded contract to the Turner Construction Co. for the construction of another reinforced concrete building, 110x157.6 feet and to be four stories high, with six stories, and equipped with vaults, elevators and other facilities. All of the structures will be equipped with metal frames and sashes glazed with wired glass.

In talking with a representative of the



INTERIOR VIEW OF CHRISTOPHER BUILDING, JACKSONVILLE, FLA.

is well known for its link-chain belt, for high speed and accuracy, obviating lost motion, besides having accomplished the problem of the chain being used as a cross-belt and at a quarter-turn on drives for transmission.

New Reinforced Concrete Buildings in Jacksonville, Fla.

Though the keeper of the Sandy Hook light the schooner Frank Huckins, outward bound from New York harbor one day late last fall, was of no more than routine interest, to the Southern business man she might have afforded considerable study. Laden with 800 tons of broken stone from the great Clinton Point crusher, 70 miles up the Hudson river, this schooner, sailing for Jacksonville, Fla., was a striking illustration of the wide-awake and progressive spirit of the Southern business world. To carry crushed limestone from the upper reaches of the Hudson 1500 miles to the St. Johns river seems extraordinary, and yet it was economical in view of its intended use.

Having decided that the rapidly-growing business of Jacksonville would make certain the renting of a modern warehouse, John G. Christopher of the J. G. Christopher Company, machinery and mill supplies, Jacksonville, had plans prepared for a building 210x95 feet, five stories high, only two stories to be built at first. Reinforced concrete was selected for the construction material as giving the most up to date, economical, and in all respects best building for industrial purposes. On completion of the plans Mr.

New York. Steel was ordered from the mills and enough lumber arranged for delivery by local mills. Cement was shipped by the Vulcanite Portland Cement Co., Vulcanite, N. J. Sand was brought from Everett City, Ga., for all the building except the floor finish, for which a mixture of sand and grit was procured from the St. Johns river. In all, for the first two stories of this warehouse there were used about 200 tons of cold-twisted steel bars, 3000 barrels of cement and 60,000 feet of lumber.

While this material was being ordered the contractor's engineering department was preparing the structural details and working plans. The superintendent, who had been selected to have charge, was working up sketches for the forms which he would require and selecting his assistant superintendent, timekeeper and the necessary concrete foreman, steel foreman, carpenter foreman and form-removing foreman. These foremen picked a few of their best workmen, and the entire organization was sent to Florida. Only a small number of carpenters and laborers were sent to handle this contract, because it was decided to employ local labor as much as possible.

The building site is at the northwest corner of Bay and Liberty streets, and as the building up of the town has been along Bay street, the Christopher Company's new building may be said to be in the midst of the wholesale district. The two street sides of the building have a brick veneer, while the back walls and all floors, columns, stairs, partitions, roof and foot-

driveway connecting with a 20-foot alleyway in the rear. This design secures an economical handling of materials and eliminates the difficult backing up of teams to loading platforms. The far side of this back alleyway consists of a reinforced concrete retaining wall of careful design and construction, as there is a high bank of fine white sand to be supported. The floors are finished with a hard granolithic finish, which was laid after the reinforced concrete framework had been completed. The bonding of this granolithic finish to the concrete slab was accomplished by the use of "Ransomite," a new preparation. All floors excepting the first, which rests on the ground, constructed so far are designed for a live load of 400 pounds per square foot, and will carry safely 1600 pounds.

The concrete was mixed in the proportion of one of concrete, two of sand and four of broken stone, for all portions of the building except the columns, which were of 1-2-3½ concrete. The reinforcement consists of cold-twisted steel bars assembled in place according to the Ransome system, and in general there were four bars to each beam, so bent as to provide for all tensile and shearing stresses, and six bars in the girders similarly bent. The slab reinforcement consists of three-eighths-inch twisted bars set six inches on centers. The columns are reinforced with longitudinal bars hooped together by bands of twisted bars. This is in accordance with the latest practice in reinforced concrete design. The larger of the two accompanying illustrations shows the arrangement and construction of the inte-



METHOD OF REINFORCING FOOTINGS FOR CHRISTOPHER BUILDING.

MANUFACTURERS' RECORD Mr. Christopher said that although situated in the heart of a timber section, he was so impressed with the ultimate economy, stability and durability of reinforced concrete for building construction purposes that he decided to use it in preference to all other methods which he had investigated. Moreover, he stated he was building these structures as an investment, and he was thoroughly convinced that this method of construction would make his investment a safer and more profitable one than any other material that could be used.

A report from Harrisonburg, Va., says that E. D. Newman of Woodstock, Va., and others have made a contract with the Valley Turnpike Co. to operate an automobile line with three cars to convey mail, express and passengers between Harrisonburg and Winchester, Va.

The Dandridge Automobile Co. is reported chartered at Dandridge, Tenn., to operate a car between Dandridge and Jefferson City. The line, it is said, is already in operation.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Meridian, Miss.—W. G. Wetmore, city engineer, is preparing plans for reinforced concrete bridge on 8th street; one span to be 25 feet long; foundation to be 10 feet deep.

Somerset, Ky.—Cincinnati, New Orleans & Texas Pacific Railway Co., H. E. Warrington, chief engineer, Cincinnati, will not erect bridges between Cincinnati, Ohio, and Somerset recently reported.

Waco, Texas.—City will vote on \$50,000 bond issue for construction of permanent bridges. Address The Mayor.

CANNING AND PACKING PLANTS

Amarillo, Texas.—O. W. Butt is promoting. It is reported, organization of company to establish \$150,000 packing-house.

Darlington, S. C.—W. D. Coggeshall Company will organize Palmetto Packing Co. to establish cannery; 30,000 cans per day.

Havre de Grace, Md.—Henry A. Osborn awarded contract to F. P. Carroll, Havre de Grace, to rebuild cannery at Osborn Station; plant proper will be two stories, 56x80 feet; warehouse 40x80 feet.

Louisville, Ky.—Kentucky Packing Co. has increased capital stock from \$100,000 to \$150,000.

Marshall, Texas.—Dixie Canning Co. incorporated by M. Lothrop, E. J. Fry and A. C. Alexander.

Natchez, Miss.—Chamber of Commerce is negotiating for establishment of canning factory; correspondence desired; L. E. Davis, secretary. (See "Machinery Wanted.")

CLAYWORKING PLANTS

Amarillo, Texas.—Amarillo Brick & Tile Co. incorporated with \$35,000 capital stock by R. L. Stringfellow, M. C. LeMaster, Terry Thompson and H. H. Cooper.

El Reno, Okla.—Chinaware.—P. J. Cook, W. E. Fryberger, V. D. Tinkelpaugh and others are promoting establishment of chinaware plant.

COAL MINES AND COKE OVENS

Bluefield, W. Va.—Norfolk & Western Coal & Coke Co., lately noted incorporated with \$25,000 capital, will not mine, but be a selling agency for companies mining on the Norfolk & Western Railroad; will handle from 2000 to 2500 tons daily output; Wm. Shands, general manager, Kelley & Moyer Building.

Carrollton, Ky.—Carrollton Coal Co. will rebuild coal elevator recently reported burned.

Chattanooga, Tenn.—Crawford & Co. (William N. Nixon, W. B. Crawford and others) changed name to Black Raven Mining Co., and will increase capital stock from \$15,000 to \$50,000.

Hackett, Ark.—Sebastian Smokeless Coal Co. incorporated with \$30,000 capital stock by T. J. Gay, W. L. Nunley, E. H. Johnson and others.

Independence, Ky.—W. S. Ware Coal Co. incorporated with \$5000 capital stock by B. S. Ware, Fred Mackey, M. C. Haight and others.

Middlesborough, Ky.—Ralston Coal Co. has begun to open proposed new mines; machinery has been purchased. John Ralston is president.

Nicholas County, W. Va.—Gauley River Timber & Coal Co. incorporated with \$100,000 capital stock by J. E. Newcomer and E. H. Wolf of Monessen, Pa.; D. J. Snyder of Greensburg, Pa., and others.

Preston County, W. Va.—Hamilton Coal & Coke Co., Frederick A. Husted, general manager, Cumberland, Md., will improve and operate old Newburg coal mine in Preston county.

Williamson, W. Va.—Williamson Coal & Coke Co. will expend about \$10,000 to install four drift mouths and incline from new openings.

CONCRETE AND CEMENT PLANTS

Nashville, Tenn.—Concrete Construction Co. incorporated with \$35,000 capital stock by J. B. Ronch, Dr. J. W. Handley, Charles Sykes and others to manufacture concrete construction blocks, etc.

COTTON COMPRESSES AND GINS

Holla, Okla.—O. B. Kee of Oklahoma City purchased site and will erect cotton-oil mill to cost \$100,000.

Sonora, Texas.—Sonora Gin Co. incorporated with \$5500 capital stock by R. E. Vanderstucken, R. W. Davis and W. L. Aldwell.

COTTONSEED-OIL MILLS

Cleveland, N. C.—Cleveland Oil & Fertilizer Co. incorporated with \$50,000 capital stock by M. C. Wood, J. A. Lyerly, R. M. Rosebro and others.

Frederick, Okla.—Chickasha Cotton Oil Co. will rebuild cottonseed oil mill reported destroyed by cyclone; loss about \$60,000; T. S. Diffe, manager.

Memphis, Tenn.—Phoenix Cotton Oil Co. has begun construction of proposed cottonseed-oil mill, costing about \$25,000 under supervision of Francis Inman, Atlanta, Ga.; building will be of reinforced concrete, 50x300 feet.

Port Arthur, Texas.—Port Arthur Export Co., recently reported organized, will erect buildings for export business and for cottonseed-oil mill, etc.; will install machinery for sacking and grinding cottonseed cake and bolting meal. Note item under "Miscellaneous Enterprises." (See "Machinery Wanted.")

ELECTRIC-LIGHT AND POWER PLANTS

Abbeville, S. C.—City will vote June 4 on \$25,000 bond issue recently noted for purchase and improvement of Abbeville Light & Power Co.'s plant; estimated cost of rebuilding \$3000; engineer not employed; J. L. McMillan, Mayor.

Frankfort, Ky.—Capitol Commission has accepted plans by Frank M. Andrews, Cincinnati, Ohio, for completion of State Capitol, work including power-house and electrical fixtures, steps and retaining wall. Olmstead Bros., Brookline, Mass., will be in charge of landscape gardening. (Recently mentioned.)

Lake Charles, La.—Hi-Mount Land Co., Ltd., has contracted with Lake Charles Ice,

plant and large cold storage; also contemplated installing creamery; correspondence with architects desired; officers are A. E. Shinn, president; Clinton C. Schmelzel, vice-president; A. H. Knox, treasurer; Stanley South, secretary. (See "Machinery Wanted.")

Lynchburg, Va.—Standard Ice Co. incorporated with \$50,000 capital stock; E. C. Ivey, president; F. S. Kirkpatrick, vice-president; J. D. Owen, secretary.

Marion, Va.—Arthur T. Short will establish ice plant of five to ten tons capacity. (See "Machinery Wanted.")

McKenzie, Tenn.—J. K. Ramsey and others are interested in establishment of ice plant.

Nants, Tenn.—Nants Cold Storage Co. will be incorporated with \$10,000 capital stock to establish cold-storage plant; president, R. A. Nants; secretary and treasurer, W. E. Nants; will probably erect \$10,000 plant; pipe system; engineer not engaged; correspondence with contractors desired; brick for walls at hand. (See "Machinery Wanted.")

FLOUR, FEED AND MEAL MILLS

Altus, Okla.—Company incorporated with \$40,000 capital stock by A. E. Nelson, Henry Kimbell, J. A. Walker and others to establish alfalfa mill; capacity probably 40 tons daily.

Bessie, Okla.—C. Reager will install alfalfa mill in connection with present flour and grist mill.

Gallatin, Mo.—Gallatin Milling & Mercantile Co. incorporated with \$25,000 capital stock by John W. Carpenter, A. G. Van Bibber, A. A. Bryan and others.

FOUNDRY AND MACHINE PLANTS

Bessemer, Ala.—Ragan Foundry Co. incorporated with \$10,000 capital stock; W. W. Hollingsworth, president; E. A. Sheifer, vice-president; G. B. Hollingsworth, secretary and treasurer; T. M. Ragan, manager.

Cape Girardeau, Mo.—Pipe, Alloys, etc.—Cape Girardeau Smelting & Manufacturing Co., recently reported incorporated with \$150,000 capital stock, is constructing proposed plant for manufacture of lead pipe and alloy metal and lead smelting; capacity 40 tons daily; cost of buildings \$20,000; cost of machinery \$50,000; president, H. M. Leonard, Missouri Trust Building, St. Louis, Mo.; engineer in charge, Thos. V. Hall, Granite City, Ill.

Wilson, N. C.—Enterprise Machine Co., recently reported incorporated with \$35,000 capital stock by B. G. Paschall and others, will establish plant at cost of \$8000; W. A. Smith, secretary and treasurer. (See "Machinery Wanted.")

GAS AND OIL DEVELOPMENTS

Bartlesville, Okla.—Indian Territory Illuminating Oil Co. contemplates purchase of Bartlesville and Tulsa gas franchises and expending several hundred thousand dollars for pipe lines to furnish gas for industrial purposes in these and adjacent towns.

Clarksburg, W. Va.—Morris Oil & Gas Co. incorporated with \$50,000 capital stock by David M. Morris, David E. West, S. D. Palmer and others.

Gulfport, Miss.—Gulfport Oil, Gas & Developing Co. incorporated with \$50,000 capital stock; A. H. Johnnesso, New Orleans, La., president; J. R. Kelly of Gulfport, vice-president; W. S. Hero, New Orleans, La., secretary and treasurer.

Houston, Texas.—Cap Rock Oil Co. incorporated with \$5000 capital stock by W. D. Plunkett, P. H. J. Feser and J. B. Blair.

Muskogee, Okla.—Marie Oil Co. incorporated with \$25,000 capital stock by H. Van Smith, T. K. Simmons and Rees Evans.

Parkersburg, W. Va.—Laurel Oil Co. incorporated with \$50,000 capital stock by T. R. Cowell, H. D. Van Valin, Harvey Elliott and others.

Tulsa, Okla.—Indian Territory Illuminating Oil Co. of Bartlesville, Okla., contemplates purchase of Bartlesville and Tulsa gas franchise and expenditure of several hundred thousand dollars for pipe lines to supply gas for industrial purposes in these and adjacent towns.

Tulsa, Okla.—Delta Oil Co. incorporated with \$40,000 capital stock by E. F. Blaise, C. G. Gray and B. F. Andrae.

ICE AND COLD-STORAGE PLANTS

El Reno, Okla.—El Reno Wholesale Produce & Cold Storage Co., recently reported incorporated (under "Guthrie, Okla.") with \$100,000 capital stock, will install 60-ton ice

plant and large cold storage; also contemplated installing creamery; correspondence with architects desired; officers are A. E. Shinn, president; Clinton C. Schmelzel, vice-president; A. H. Knox, treasurer; Stanley South, secretary. (See "Machinery Wanted.")

Lynchburg, Va.—Standard Ice Co. incorporated with \$50,000 capital stock; E. C. Ivey, president; F. S. Kirkpatrick, vice-president; J. D. Owen, secretary.

Marion, Va.—Arthur T. Short will establish ice plant of five to ten tons capacity. (See "Machinery Wanted.")

McKenzie, Tenn.—J. K. Ramsey and others are interested in establishment of ice plant.

Nants, Tenn.—Nants Cold Storage Co. will be incorporated with \$10,000 capital stock to establish cold-storage plant; president, R. A. Nants; secretary and treasurer, W. E. Nants; will probably erect \$10,000 plant; pipe system; engineer not engaged; correspondence with contractors desired; brick for walls at hand. (See "Machinery Wanted.")

LUMBER-MANUFACTURING PLANTS

Buckingham, Va.—Driscoll Manufacturing Co. incorporated with \$15,000 capital stock; M. P. Bonifant, president; G. L. English, vice-president, both of Powhatan, Va.; E. L. Driscoll, secretary-treasurer, of Dillwyn, Va.

Chillicothe, Mo.—Saunders-Turner Lumber Co. has increased its capital stock from \$25,000 to \$100,000.

Davis, W. Va.—Babcock Lumber & Boom Co. will establish hardwood plant.

Geneva, Ala.—Choctawatchee Lumber Co. incorporated with \$12,000 capital stock by J. T. Duncan, J. G. Lassefer, W. W. Camp and J. P. Lawson.

Gibbsland, La.—Patton-Wakeman Lumber Co. has increased capital stock and will erect sawmill in connection with planer; will, it is reported, construct tramroads to timber land it controls within a radius of 10 miles.

Kansas City, Mo.—Railway Lumber & Supply Co. incorporated with \$25,000 capital stock by L. H. Atkinson, E. G. Wolf, A. Follett and others.

Lebanon, Tenn.—Lee Clark, Livingston, Tenn., mentioned in March as having purchased Lebanon Planing Mill Co.'s plant, contemplates erecting new mill to manufacture tables.

Louisville, Ky.—The Hardwood Manufacturing Co. incorporated with \$150,000 capital stock by G. L. Falk, J. B. Offutt and H. H. Sims.

New Orleans, La.—Amalgamated Construction Co. incorporated by W. Osgood Orton, Frank G. Conklin, Henry V. Mielly and others to dredge for sunken logs in sawmill streams.

Hattiesburg, Miss.—J. C. Thompkins Lumber Co. incorporated with \$5000 capital stock by J. C. Thompkins, C. H. Grieth and others.

Palatka, Fla.—Stenson & Puff have begun erection of proposed saw and planing mill. (See "Machinery Wanted.")

Pocahontas County, W. Va.—West Virginia Pulp & Paper Co., John G. Luke, president, 300 Broadway, New York, purchased about 30,000 acres of timber land in Pocahontas, Randolph and Webster counties, W. Va., adjoining 100,000 acres now owned, which will supply pulp wood for its pulp and paper mills at Covington, Va.; Piedmont and Davis, W. Va., and Luke, Md.; property is underlaid with bituminous coal.

Winchester, Ky.—Boone Lumber Co. incorporated with \$30,000 capital stock by E. G. Shippen, H. J. Gates and G. J. Ballard.

MINING

Aberdeen, Miss.—Tombigbee Valley Development Co. incorporated with \$200,000 capital stock by John J. MacIntire, George H. Johnson, H. E. Reynolds and others.

Alpine, Texas.—Marble.—John Young Land Co. commenced construction of proposed marble quarry plant recently noted; contemplates operating quarry within 90 days.

Cartersville, Mo.—Zinc.—Hanover Zinc Co., recently reported incorporated with \$100,000 capital stock by Burt W. Lyon, Joplin, Mo., and others, has leased 36 acres of land near Cartersville on which shaft is located and 14 drill holes are in ore; 200-ton mill will be erected.

Cherokee County, S. C.—Gold.—Pacolet Mining Co. will be organized by Samuel Lipscomb, Pacolet, S. C.; A. H. Foster, J. W. McLaure, F. M. Farr and others, all of Union, S. C., to develop gold mines. (Mr. Lipscomb recently mentioned to reopen gold mine near Ravenna, S. C.)

Gannett Quarry, Ala.—Marble.—Alabama White Marble Co. will expend about \$150,000 for new machinery and enlargement of sawing and finishing plant at quarries. John Stephen Sewell is in charge; postoffice, Gannett Quarry; telegraph office, Sylacauga, Ala.

Golden, N. C.—Gold.—War Eagle Hydraulic Mining Co., recently reported incorporated (under "Greenville, S. C."), will establish plant for developing river placer gold deposits; to wash and remove 400 cubic yards daily; water-power; will erect cottage for men at cost of \$300; cost of machinery, \$2000; president, T. C. Stone; secretary and treasurer, E. W. Carpenter; manager, F. L. Plaisance; architect, F. H. H. Calhoun.

Harpers Ferry, W. Va.—Onyx, Marble, etc. United States Onyx Co. incorporated with \$100,000 capital stock by T. J. E. Yocum, S. R. Still, Jr., Hugh R. Miller and others, all of Carlisle, Pa.

Joplin, Mo.—Lizzie D. Mining Co. incorporated with \$48,000 capital stock by Henry Eberwine, S. Hurst, E. P. Dwyer and others.

Louisville, Ky.—Sand and Gravel.—Ohio Falls Sand & Gravel Co. incorporated with \$15,000 capital stock by Ben Humphreys, Henry L. Kremer and Annie Levering.

Nicholasville, Ky.—Barytes.—Kentucky Barytes Co. incorporated with \$30,000 capital stock and takes over Jossamine Barytes Co.; G. A. Roy, president and treasurer; L. A. Bell, vice-president and secretary; W. J. Weinman, general manager.

Petrolia, Texas.—Kerwin Drilling Co. incorporated by K. N. Haggood, R. H. Palmer and W. J. Kerwin.

Roanoke, Va.—Sunnyside Awning Co., Inc., recently incorrectly noted as Sunnyside Granite Co., correctly mentioned in "Miscellaneous Manufacturing Plants," May 28. (See "Machinery Wanted.")

Winnfield, La.—Marble.—Southern Mineral & Land Improvement Co. will, it is reported, spend about \$100,000 to develop marble quarries in Winn parish; property comprises about 1700 acres, and a five-mile railway will be constructed to connect it with main lines at Winnfield. Company will at first crush rock for concrete-making, ballasting and road building, and later quarry stone for building purposes; possibly Portland cement will be manufactured in the future. I. L. Lyons, New Orleans, La., is president; J. F. Coleman, Hibernia Bank Building, New Orleans, La., is engineer in charge.

Woodward, Ala.—Iron.—Woodward Iron Co., J. H. Woodward, president, Birmingham, Ala., is reported as beginning development of additional brown-ore properties, 8000 acres.

MISCELLANEOUS CONSTRUCTION WORK

Baltimore, Md.—Pier.—Baltimore & Philadelphia Steamboat Co., Clarence Shriver, manager, Light and Pratt streets, awarded contract to Andrew Miller, 3122 Foster avenue, Baltimore, to build covered pier 191x454 feet at Light and Pratt streets.

Chapel Hill, N. C.—Heating Plant.—W. P. Longworth & Co., No. 1 North 7th street, Richmond, Va., received contract for heating plant in Biological Building, University of North Carolina; plans by Frank P. Mearns & Co., Washington, D. C. (Biological building recently noted.)

Ensley, Ala.—Storage Reservoir.—Semet-Solvay Company will erect 30,000-gallon reservoir for storing pitch.

Farmville, Va.—Heating Plant.—W. P. Longworth & Co., No. 1 North 7th street, Richmond, Va., received contract for power plant, piping, heating extension and remodeling heating apparatus at State Female Normal School; E. C. Wiley, Lynchburg, Va., in charge.

Mission, Texas.—Irrigation.—Lomita Co-operative Irrigation Co. incorporated with \$70,000 capital stock by W. F. Cunningham, John J. Conway, James W. Holt and others.

Riverton, Ala.—Concrete Wall.—Contract will be awarded June 27 for construction of concrete river wall at Colbert Shoals Canal, near Riverton, Ala.; Wm. W. Harts, Major, Engineers, U. S. Engineer's Office, Nashville, Tenn. (See "Machinery Wanted.")

San Angelo, Texas.—Dam.—Gulf, Colorado & Santa Fe Railroad, C. F. W. Felt, chief engineer, Galveston, Texas, will not at present

construct dam across Concho river. (Recently reported.)

Waco, Texas.—Levee.—City will vote on \$15,000 bond issue to enlarge and repair levee in East Waco. Address The Mayor.

York County, S. C.—Monument.—Southern Marble & Granite Co., Spartanburg, S. C., recently noted as lowest bidder, has been awarded contract for furnishing materials and constructing obelisk monument 115 feet high on Kings Mountain battlefield; will employ competent setter.

MISCELLANEOUS ENTERPRISES

Athens, Texas.—Orchard.—Olga Orchard Co. incorporated with \$15,000 capital stock by E. L. Maymon and A. B. Mandelstamm of Athens and E. T. Brady of Dallas, Texas.

Atlanta, Ga.—Bicycles, etc.—Elyea-Austell Co. incorporated with \$50,000 capital stock by C. L. Elyea, Alfred Austell and W. C. Warren.

Atlanta, Ga.—Suburban Development.—Edwin P. Ansley has purchased 25 acres of land in Ansley Park and will expend about \$55,000 in development work; contract for landscape improvements awarded to S. Z. Ruff, engineer, Atlanta.

Atlanta, Ga.—Suburban Development.—E. G. Black, representing others, purchased between 700 and 1000 acres of land in Cobb county, which will be developed as suburb.

Baltimore, Md.—Land Improvement.—Menlo Park Land Co., recently reported incorporated with \$75,000 capital stock by Frank Tierney, Howard and Franklin streets, and others, has purchased 48 acres of land at Park Heights and Glenn avenues, and will arrange to divide into streets, lay sidewalks and prepare tract for building operations.

Baltimore, Md.—Land Improvement.—Green Spring Park Co., 619 Galtier Building, recently reported incorporated, will develop 25 acres land on Green Spring avenue; will erect bungalows or cottages; president, Frederick H. Baumann; vice-president, Warren Anderson; secretary and treasurer, Thomas R. Bond. (See "Dwellings.")

Baltimore, Md.—Land Improvement.—Arundel Realty Co. incorporated with \$10,000 capital stock by Francis E. Yewell, 507 Calvert Building; Edward J. Gallagher, 2537 East Monument street, and Edgar M. Noel, president Noel Construction Co., 36 United States Fidelity & Guaranty Building.

Bowling Green, Ky.—Publishing.—Bowling Green Messenger Publishing Co. incorporated with \$7500 capital stock by C. M. Coombs, J. M. Robertson and Henry Hines.

Brownsville, Texas.—Electric & Plumbing Supplies.—Brownsville Electric & Plumbing Co. incorporated with \$5000 capital stock by S. C. Tucker, Fred Cowan and A. C. Brokaw.

Columbia, S. C.—Land Development.—Metropolitan Development Co. incorporated with \$5000 capital stock; Washington Clark, president; Howard Caldwell, vice-president and secretary; N. H. Edmunds, treasurer.

Columbus, Ga.—Printing.—Wolfson Card Co., 1207 Broad street, awarded contract to L. E. Wooten of Columbus for erection of building; three stories and basement; 25x107 feet; red brick; electric elevator; third floor will be used for printing and manufacturing; Mr. Wooten has also prepared plans.

Dallas, Texas.—Steam Laundry.—White Star Laundry incorporated with \$10,000 capital stock by F. C. Carroll, D. A. Robinson and R. E. L. Saner.

Durham, N. C.—Land Improvement.—Duke Land & Improvement Co. incorporated with \$50,000 capital stock by B. L. Duke, J. B. Mason and F. L. Fuller.

Electra, Texas.—Grain Elevator.—Farmers' Elevator Co. incorporated with \$5000 capital stock by E. A. Dale, J. R. Brewer, W. L. Jennings and others.

Ensley, Ala.—Land Improvement.—Consolidated Realty Co. incorporated with \$15,000 capital stock; Jay Smith, president; H. S. Meade, vice-president; J. S. Faulkner, secretary.

Frederick, Md.—Road Construction.—Highway Construction Co. incorporated with \$10,000 capital stock by Thomas B. Johnson, Otho J. Keller, William O. Keller and others to construct roads, streets, sewers, etc.

Ganado, Texas.—Elevator.—Ganado Elevator & Warehouse Co. awarded contract to Phil Hoelzel, Ganado, for erection of rice elevator of 200,000 bushels capacity; cost \$20,000; plans by Chas. R. Dunbar, 204 Stewart Building, Houston, Texas; company also contemplates building warehouse of 32,000 bushels capacity.

Grosse Tete, La.—Planting.—P. W. Holliday & Sons Co., Ltd., incorporated with \$25,000

capital stock; P. W. Holliday, president; P. W. Holliday, Jr., vice-president; Daniel D. Holliday, secretary and treasurer.

Hushpeckena, Miss.—Pecan Cultivation.—Yazoo Valley Pecan Co. incorporated with \$500,000 capital stock by R. W. Parham, S. L. Parks, P. M. Gullick and Charles T. West, all of Memphis, Tenn.

Martinsburg, W. Va.—Fruit Orchard.—Good Hope Colonization Co. incorporated with \$10,000 capital stock by P. Karutz, Edward Williams, W. W. Trout and others.

Memphis, Tenn.—Printing.—H. W. Dixon Printing Co. incorporated with \$50,000 capital stock by H. W. Dixon, J. H. Jones, Ben Pentecost and others.

Morgantown, W. Va.—Orchard.—Great Kanawha Orchard Co. incorporated with \$100,000 capital stock by J. H. Stewart, R. A. Stewart, J. C. Trazer and others.

Muskogee, Okla.—Land Improvement.—Muskogee Land Co. incorporated with \$5000 capital stock by W. O. Cromwell, C. V. Porter and V. W. Whiting, all of Enid, Okla.

Nashville, Tenn.—Steam Laundry.—R. W. Turner & Co. will erect two-story building; 170x50 feet; Hugh Osborne has leased building for steam laundry.

New Orleans, La.—Land Improvement.—Progressive Land & Investment Co. incorporated with \$10,000 capital stock by Jules Haywood, L. N. Williams, W. H. Reed and others.

Owensboro, Ky.—Hardware and Iron.—Owensboro Hardware & Iron Co. incorporated with \$125,000 capital stock by Regina Guenther, J. Ed Guenther and Frank B. Guenther.

Palatka, Fla.—Marine Railway.—Stenson & Puff have begun construction of proposed marine railway; engine and full gear, chains, etc., not purchased yet. (See "Machinery Wanted.")

Port Arthur, Texas.—Export Company.—Port Arthur Export Co., recently reported organized (under "Cottonseed Oil Mills"), will export cottonseed products—grain, rice, by-products, cotton, etc.; will install machinery for sacking and grinding cottonseed cake, and for bolting meal; will erect cotton shed 90x100 feet; will also erect mill and elevator at estimated cost of \$50,000; capacity 100,000 tons; president, J. W. Gates; Carl Elchenberg, vice-president and general manager. (See "Machinery Wanted.")

Richmond, Va.—Land Improvement.—Westhampton Realty Corporation incorporated with \$50,000 capital stock; Edgar G. Gunn, president; R. H. Hardwood, vice president; William Todd, secretary.

San Angelo, Texas.—Publishing.—Item Publishing Co. incorporated with \$10,000 capital stock by A. Thrift Wilson, W. P. Tharpe and T. M. Vaughan.

Shelby, N. C.—Automobiles.—Shelby Auto Co. incorporated with \$10,000 capital stock by W. T. Calton, J. D. Lineberger, B. H. Palmer and Rush Hamrick.

St. Louis, Mo.—Contracting.—Frank T. Sullivan Granite Co. incorporated by Mary T. Sullivan, John J. O'Neill and Julius Smith.

St. Louis, Mo.—Lumber, Coal and Cement.—Beckers-Schnelle Lumber Co. incorporated with \$25,000 capital stock by Charles A. Beckers, A. H. Schnelle and Ferdinand Blankenmeier.

St. Petersburg, Fla.—Truck Growing.—Pincas Truck-Growing Co. incorporated with \$25,000 capital stock; E. B. Rowland, president; Noel A. Mitchell, vice-president; R. S. Hanna, secretary; T. K. Wilson, treasurer.

Whitesboro, Texas.—Printing.—Whitesboro Printing Co. incorporated by S. B. Cowell, Theo. Denton and George W. Acton.

MISCELLANEOUS MANUFACTURING PLANTS

Alexandria, Va.—Cider and Vinegar.—Semmes-Kelly Company, Charles W. Semmes, president, 614 Pennsylvania avenue, Washington, D. C., has leased building in Alexandria which will be equipped for manufacturing cider and vinegar with capacity of 1000 barrels of cider daily; main office will continue in Washington. Company also contemplates establishing cider mill at Colesville, Va.

Anderson, S. C.—Gas Plant.—W. H. Harrison, Jr., contracting gas engineer, Blount, Miss., lately mentioned as having secured franchise for gas works at Anderson, will install plant during summer and fall. Chicago capitalists are interested. (Address incorrectly stated as Cincinnati, Ohio, in recent item.)

Anderson, S. C.—Shingles.—John T. Bur-

ress of John T. Burress & Son will establish plant to manufacture patented metal shingle.

Anne Arundel County, Md.—Boat-building Plant.—Edward F. Neale, Charles and West streets, Baltimore, Md., has purchased three acres of land in Anne Arundel county and will establish plant for manufacturing launches and small boats.

Atlanta, Ga.—Drugs.—Tipton & Co. incorporated with \$5000 capital stock, with privilege of increasing to \$50,000, by T. C. Tipton, G. W. Walker and C. A. Forrest; will manufacture medicines; manager, T. C. Tipton.

Atlanta, Ga.—Candy and Cracker Factory.—Harry L. Schlesinger is planning to rebuild candy and cracker factory recently burned at loss of \$200,000; building to be of pressed brick and granite; four stories and basement; 200x110 feet; total expenditure about \$400,000.

Atlanta, Ga.—National Fruit Gathering & Manufacturing Co. incorporated with \$25,000 capital stock, and privilege to increase to \$100,000, by G. C. Hannah, W. P. Fain, D. N. McCullough and others.

Beaumont, Texas.—Bakery.—Peerless Bakery Co. will erect two-story addition to present structure.

Centralla, Mo.—Brooms.—Centralla Broom Co. incorporated with \$10,000 capital stock by A. L. Hulien, J. K. Pool, J. T. Mitchell and others.

Charlotte, N. C.—Sewing-machine Attachment.—Handy Sewing Machine Attachment Co. will be incorporated by P. M. Cave, J. N. McCausland, F. D. Lethco and others to manufacture patented rolled-steel nickel-plated sewing-machine attachment for sharpening scissors, polishing jewelry, etc.; C. F. Brewer, general manager.

Charlotte, N. C.—Marble Works.—Queen City Granite and Marble Works incorporated by George W. M. Aitken and James H. Patterson; offices, 3d and Johnson streets.

Colesville, Pa. O. Stuart, Va.—Cider Mill.—Semmes-Kelly Company, Charles W. Semmes, president, 614 Pennsylvania avenue, Washington, D. C., contemplates establishing cider mill at Colesville. (See "Miscellaneous Manufacturing," Alexandria, Va.)

Collins, Miss.—Drugs.—Collins Drug Co. incorporated with \$10,000 capital stock by C. H. Ramsay, W. W. Davis and others.

Elizabethtown, Ky.—Creamery.—Hardin County Creamery Co. incorporated with \$5000 capital stock by A. L. Cox, H. P. Rogers and B. F. Collins.

El Reno, Okla.—Creamery.—El Reno Wholesale Produce & Cold Storage Co., A. E. Shinn, president, contemplates installing creamery; wishes to correspond with architect. (See "Ice and Cold-storage Plants" and "Machinery Wanted.")

Fredericksburg, Va.—Shoes.—Green Bros. Shoes Corporation, Chas. J. Green, president and treasurer, recently reported incorporated with \$100,000 capital stock, purchased Kenmore factory No. 1 and will manufacture shoes.

Gainesville, Texas.—Creamery.—Acme Creamery Co. incorporated with \$7500 capital stock by S. S. Lard, D. D. Keeler, H. G. Bush and P. C. McCarthy.

Gainesville, Texas.—Soap.—J. F. Mason & Son, Des Moines, Iowa, will, it is reported, organize company to establish soap factory at Gainesville.

Greensboro, N. C.—Bedsprings and Davenport.—Automatic Bed Co., H. C. Creedon, manager, will remove plant from Mebane, N. C., to Greensboro; is erecting building at cost of \$5000; three stories; 40x150 feet; frame; engineer and architect, Cape Fear Manufacturing Co., Greensboro; will manufacture bedsprings and automatic davenports; daily capacity, 12 davenports and 125 springs.

Kansas City, Mo.—Mall Bag.—Safety Mall Bag Co. incorporated with \$50,000 capital stock by James G. Farnham, R. H. Nolan and Rae D. Ely.

Lake Charles, La.—Mattresses and Furniture.—Louisiana Mattress & Furniture Co., Ltd., incorporated with David Reims president and William T. White secretary and treasurer.

Lehigh, Okla.—Manufacturing Monuments.—Lehigh Monumental Cut Stone Co. incorporated by Mary Alice Slater and Della Beck of Lehigh and Rupert Lee Farrell of Dallas, Texas.

Memphis, Tenn.—Cotton Gin and Compress.—Farmers' Gin Compress & Cotton Co., lately noted as incorporating, will manufacture and introduce compress for baling cotton at local gin; Harvie Jordan of Atlanta, Ga., president; Heber Jones of Memphis, general manager; Memphis offices in Tennessee Trust Building; Atlanta offices in Andrews Building.

Mexia, Texas.—Creamery.—Young Men's Industrial Club is promoting establishment of creamery to cost about \$2500. Smith & Whyte will probably operate plant.

Milltown, Ga.—Turpentine.—Murrell Turpentine Co. will rebuild turpentine distillery recently reported burned.

Natchez, Miss.—Mattress Factory.—Chamber of Commerce is negotiating for establishment of mattress-manufacturing plant; correspondence desired; L. E. Davis, secretary. (See "Machinery Wanted.")

New Orleans, La.—Sugar, etc.—Stella Planting & Manufacturing Co. incorporated with \$75,000 capital stock; James B. Sinnott, president; Walter L. Saxon, vice-president; Paul J. Orchard, secretary and treasurer, to plant, manufacture and refine sugar, etc.

Norfolk, Va.—Paints.—Marine Paint Corporation incorporated with \$15,000 capital stock; J. F. Brussels, Norfolk, president; R. M. Boiling, Richmond, Va., vice-president; George Lindsay, Portsmouth, Va., secretary.

Norfolk, Va.—Distilling.—H. G. Williams & Co., recently noted to build rectifying plant, will erect \$30,000 building; architects, Ferguson & Calrow, Law Building, Norfolk; cost of machinery \$5000.

Paris, Ky.—Marble and Granite Works.—W. A. Wallen, Owenton, Ky., and Ross C. Adams, Lexington, Ky., will establish plant to manufacture granite and marble monuments; will erect sheds and install machinery. (See "Machinery Wanted.")

Poors Knob, N. C.—Corn Mills, etc.—W. C. Meadows Mill Co., lately reported incorporated, succeeds W. C. Meadows & Son, and has established plant for manufacturing portable corn mills; also contracts for corn, flour and saw mills. This company buys quantities of pulleys, shafting, babbit metal, bolts, rod iron, band iron, burrstones, paints, etc. W. C. Meadows is manager.

Quincy, Fla.—Tobacco Factory.—Quincy-Florida Tobacco Co. incorporated with \$300,000 capital stock and privilege of increasing to \$600,000 by J. S. Shaw and C. R. Shaw, both of Quincy, and R. K. Shaw, Atlanta, Ga.

Savannah, Ga.—Food Products.—Dainty Food Folks, lately reported incorporated, will manufacture pure food products. Alfred H. Millar, president, Hall and Price streets. (See "Machinery Wanted.")

Staunton, Va.—Safety Appliance.—Railway Safety Appliance Co. incorporated with \$200,000 capital stock; W. A. Higgs, Charleston, W. Va., president; J. N. Garber, Harrisonburg, Va., vice-president; C. A. Crowell, secretary, and J. E. Runnels, treasurer, both of Staunton.

St. Louis, Mo.—Bottling.—Elk Bottling Co. incorporated with \$50,000 capital stock by Esau Seltzer, Ed Ritterand and Jacob Shucart.

St. Louis, Mo.—White Lead, Paints, etc.—Hammar Bros. White Lead Co. incorporated with \$500,000 capital stock by Park G. Hammar, Frank V. Hammar and Percy F. Hammar.

St. Louis, Mo.—Sheet Metal.—King Heater Manufacturing Co. incorporated with \$30,000 capital stock by Lewis W. Hemp, Joseph L. Hemp and William H. Hemp.

St. Louis, Mo.—Olive.—Olive Manufacturing Co., 827 Pierce Building, recently reported incorporated with \$200,000 capital stock, will establish plant in St. Francis county and St. Louis; will erect building 50x150 feet; capacity 200 tons daily; G. S. Kann, president; P. L. Buchanan, vice-president and engineer; W. C. Matheny, secretary.

Tampa, Fla.—Cigar Factory.—Stachelberg & Co.'s building, contract for which was recently noted awarded to Levick & Mobley, 311 Polk street, Tampa, will be of brick; three stories and basement; wood frame and floors; 236x50 feet; hand-power elevator; electric lighting; cost \$38,000.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Fort Worth, Texas.—St. Louis Southwestern Railway of Texas, F. H. Britton, president, St. Louis, Mo., will, it is reported, expend \$500,000 in constructing terminals and freight depot.

ROAD AND STREET IMPROVEMENTS

Baltimore, Md.—General Paving & Contracting Co. (formerly Maryland Pavement Co.), 6 East Lexington street, Baltimore, will probably receive contract at \$1.55 per square yard for paving 30th street from Charles to St. Paul streets with sheet asphalt; James H. Smith, president Commissioners for Opening Streets, Hoen Building. (Recently mentioned.)

Cedartown, Ga.—City has voted \$30,000 of bonds for improving streets and extending sewer system. Address The Mayor. (Recently mentioned.)

Charleston, W. Va.—City Council has authorized issuance of \$300,000 of bonds for street paving. Address The Mayor.

Chattanooga, Tenn.—Board of Public Works, H. F. Van Dusen, chairman, awarded contract to Noll Construction Co., 8 East 6th street, Chattanooga, at \$16,969 to grade and build streets in city paving districts Nos. 23, 33, 31 and 8 with chert and vitrified brick.

Clarksdale, Miss.—City will receive sealed bids until June 15 for construction of about five miles sidewalk; plans by Walter G. Kirkpatrick, Jackson, Miss.; city was noted in April to construct 25 miles of concrete walks and curbing. (See "Machinery Wanted.")

Courtland, Va.—City awarded contract to Emporia Concrete Construction Co., Emporia, Va., for paving sidewalks.

Dallas, Texas.—City will pave portion of Ross avenue. Bids will be opened June 8; J. B. Winslett, City Secretary. (See "Machinery Wanted.")

Emporia, Va.—Greensville county will construct six miles of road at cost of about \$1000 per mile. Address County Commissioners.

Georgetown, Texas.—Williamson county will vote September 5 on \$500,000 bond issue for building permanent roads. Address County Commissioners.

Gulfport, Miss.—City awarded contract to Graves-Matthews Shale Brick Co., Birmingham, Ala., for about 40,000 square yards of vitrified brick street paving; street work includes 15,000 linear feet concrete curb and gutter, 15,000 linear feet granite curbing and storm sewers, as stated in April; total cost about \$122,000.

Johnson City, Tenn.—City will pave improvement districts Nos. 1, 2 and 3 and one block on Main street, approximately 21,000,000 yards, and 6100 linear feet concrete curb or gutter; E. E. Elsworth, Recorder; L. N. Wilson, City Engineer. (See "Machinery Wanted.")

Lebanon, Va.—Russell county contemplates expending \$100,000 for road improvements. Address County Commissioners.

Louisville, Ky.—City will resurface Broadway, Walnut, Bank, Oak and other streets with asphalt and construct vitrified brick gutters; estimated cost \$73,000; Roger McGrath, secretary Board of Public Works; Joseph P. Claybrook, City Engineer.

Paducah, Ky.—City will award contract June 9 for reconstructing Broadway and Jefferson streets from 9th to 11th streets with bitulithic, asphalt or vitrified brick; L. F. Kolb, secretary Board of Public Works; L. A. Washington, City Engineer. (See "Machinery Wanted.")

Paducah, Ky.—George Weikel of Paducah has let contract for construction of concrete sidewalks and curbing on Jefferson street and Broadway from 9th to 11th streets, and for grading and graveling Clark street from 10th street to Gould avenue and Gould avenue from Clark street to Bronson avenue. (Recently mentioned.)

Shawnee, Okla.—City awarded contract to A. M. Blodgett for 30,000 square yards brick paving at \$58,000, and Metropolitan Engineering & Construction Co. for 76,000 square yards asphalt paving at \$147,440; Frank P. Stearns, Mayor. (Recently mentioned.)

Victoria, Texas.—Sidewalks recently noted to be contracted to Concrete Construction Co., 225 St. Mary's street, San Antonio, Texas, will be laid at approximate cost of \$15,000; about five miles four-foot cement sidewalk; C. B. Foyer, Victoria, engineer in charge. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Cedartown, Ga.—City has voted \$30,000 of bonds for sewer extension and street improvements. Address The Mayor. (Recently mentioned.)

Coleman, Texas.—Coleman Sewer Co. incorporated by A. L. Coulson, R. I. Bowen, J. M. Sewell and others.

Columbia, Miss.—City has voted \$50,000 of bonds for constructing sewer system and water-works. Address The Mayor. (Recently mentioned.)

Elyton, Postoffice Birmingham, Ala.—L. H. Salter, care of Courthouse, Birmingham, Ala., is engineer in charge of construction of sewer system, for which \$40,000 of bonds were recently noted to be voted; Frank W. Smith, Mayor of Elyton, No. 508 Brown-Marx Building, Birmingham.

Gulfport, Miss.—J. W. Gurley & Co., Mobile, Ala., have contract to construct storm

sewers mentioned in April. (See "Road and Street Improvements.")

Johnson City, Tenn.—S. H. Ponder, Johnson City, has contract at \$14,336.43, to construct 5000 feet trunk sewers and 2000 feet sub-main; L. N. Wilson, Jr., city engineer. (Recently mentioned.)

Lake Charles, La.—Hi-Mount Land Co., Ltd., is perfecting arrangements for construction of sewer system at Hi-Mount.

Maxton, N. C.—City awarded contract to Abel & Edwards, Hickory, N. C., to construct sewer system and water-works, costing about \$40,000; J. M. Bandy, engineer; R. M. Williams, Mayor. (Recently mentioned.)

Shawnee, Okla.—City awarded contract to Robert L. Foster, Kansas City, Mo., for sewer work at \$31,000; Frank P. Stearns, Mayor.

Stillwater, Okla.—City Engineer Merry has completed plans and specifications for sanitary sewer system recently noted; C. O. Edgerton, City Clerk.

TELEPHONE SYSTEMS

Alamo, Tenn.—Alamo Home Telephone Co. incorporated with Thomas H. Durham president, Eugene Casey vice-president and Dr. T. C. Love secretary.

Brenham, Texas.—Brenham Long Point Telephone Co. incorporated by Andrew Kammerer, O. F. Kieck and E. H. Keim.

North Wilkesboro, N. C.—Horton Telephone Co., recently reported incorporated, has elected H. W. Horton president, treasurer and general manager; will operate plant connecting North Wilkesboro, Wilkesboro, Jefferson, etc., with two exchanges and about 100 miles toll lines; Ralph Duncan, engineer in charge, North Wilkesboro. (See "Machinery Wanted.")

Stephensport, Ky.—Stephensport Telephone Co. incorporated by Mrs. Sallie Bennet, Mrs. M. L. Roberts and Andrew Crawford.

TEXTILE MILLS

Lando, S. C.—Cotton Cloth.—Manetta Mills reported as to build an addition.

Lebanon, Tenn.—Woolen Goods.—H. K. Edgerton is reported as planning organization of company, previously mentioned, to manufacture woolen goods; capital stock to be probably \$75,000.

Rockingham, N. C.—Cotton Cloth.—Great Falls Manufacturing Co. is reported as to add machinery costing \$15,000.

WATER-WORKS

Columbia, Miss.—City has voted \$50,000 of bonds for constructing water-works and sewer system. Address The Mayor. (Recently mentioned.)

Conway, Ark.—J. C. Wilson, St. Louis, Mo., is negotiating for establishment of water-works system at Conway; it is proposed to sink deep wells in sand of Arkansas river bottom land and install electric pump.

Dickson, Tenn.—City has engaged J. R. Neblett, Charlotte, Tenn., to make survey for construction of water-works, select material and supervise its placing. (City was mentioned in March as having voted \$25,000 of bonds.)

Elgin, Texas.—City will erect water tank and install gasoline engine to pump water for stock purposes. Address The Mayor.

Ennis, Texas.—City awarded contract to Morgan & Franks, Corsicana, Texas, to bore deep well. If water can be secured three or four more wells will be bored. Address The Mayor.

Hastings, Okla.—Board of Trustees, J. P. Brawley, president, contemplates election to vote on bond issue for installation of water-works.

Lake Charles, La.—Hi-Mount Land Co., Ltd., has contracted with Lake Charles Ice, Light & Water-works Co. for extension of water mains to Hi-Mount and furnishing suburb with electric lights.

Lindsay, Okla.—City employed engineer to prepare plans and specifications for proposed water-works system; cost \$25,000. Address The Mayor.

Mayfield, Ky.—Mayfield Water & Light Co., John W. Landrum, president, will rebuild water, light and power plant recently reported burned; W. E. Playter, engineer. (See "Machinery Wanted.")

Maxton, N. C.—City awarded contract to Abel & Edwards, Hickory, N. C., for constructing water-works and sewer system to cost about \$40,000; J. M. Bandy, Laurinburg, N. C., engineer; R. M. Williams, Mayor. (Recently mentioned.)

Pascagoula, Miss.—J. J. Paquette, Frank H. Lewis, J. M. Ford and others have been

granted franchise to lay water mains on beach front. John A. Sutter of Pass Christian, Miss., has contract to sink artesian well.

Ponca, Okla.—City awarded contracts for extension of water-works system, for which \$30,000 of bonds were recently reported voted; James Hutchison, Mayor.

Ponca, Okla.—City awarded contract to M. Cunyan, Ponca, Okla., at \$3580 for extension of water-works and to United States Pipe Co., St. Louis, Mo., at \$7413 for furnishing pipe; Burns & McDonnell, engineers, Dwight Building, Kansas City, Mo., will superintend work; James Hutchison, Mayor. (Recently mentioned.)

Savannah, Ga.—American Suburban Co., 16 Bryan street, is planning to install water-works for Park place; W. D. Pender, president of committee in charge.

Stillwater, Okla.—City will extend water-works system; \$33,000 of bonds recently reported voted; C. O. Edgerton, City Clerk.

Teague, Texas.—City has voted \$50,000 of bonds for construction of water-works; J. W. Maxey of Houston, Texas, previously mentioned to make surveys. Address The Mayor.

Tulsa, Okla.—City has voted \$225,000 of bonds to purchase and improve water-works. Address The Mayor. (Further facts mentioned in April.)

WOODWORKING PLANTS

Bartlesville, Okla.—Bartlesville Woodworking Co. will erect additional building; two stories; brick; 50x50 feet.

Biltmore, N. C.—Box Shooks.—Western Carolina Lumber & Box Co. will establish plant for manufacturing box shooks; machinery will be operated by electric power furnished by Weaver Power Co. Elmer C. Westall will be general manager; E. S. Clayton, superintendent.

Brunswick, Ga.—American Pencil Co., New York, N. Y., will, it is reported, locate sawmill at Frederica, on St. Simons Island, to cut cedar timber into slabs for pencil factories.

Claremore, Okla.—Furniture Factory.—W. N. Vanfelt will erect furniture factory.

Cullman, Ala.—Wagons.—Charles Rhuel will rebuild wagon factory destroyed by fire; three stories; brick.

Fort Payne, Ala.—Barrels.—Alabama Coopers Co. will rebuild plant reported burned.

Kansas City, Mo.—Excelsior.—Blue Valley Excelsior Co. incorporated with \$10,000 capital stock by S. A. Coldren, C. H. Washburn and M. E. Stewart.

Mt. Crawford, Va.—Heading Factory.—John H. Monger will rebuild sawmill and heading factory recently reported burned; will erect frame building, 30x30 feet, at cost of \$1000; cost of machinery, \$2000; daily capacity, 150 flour-barrel headings, oak; office address, North River, Va. (See "Machinery Wanted.")

New Orleans, La.—Staves, etc.—Foxley Stave & Lumber Co., Ltd., incorporated with \$10,000 capital stock by F. J. Foxley, John C. Liversedge, W. H. Scott and D. Thomas Rees.

New Orleans, La.—Barrels.—Brooklyn Coopers Co. will erect two buildings on site 550x250 feet and will manufacture barrels to supply American Sugar Co.'s refinery now building.

North Holston, Va.—Veneering.—W. L. Branch, Charleston, W. Va., will, it is reported, establish veneering plant at North Holston to be operated in connection with Quigley Lumber Co.

BURNED

Anniston, Ala.—Lewis Machine Co.'s plant; loss about \$50,000.

Atlanta, Ga.—J. D. Frazier & Co.'s hay and grain warehouse; reported loss about \$15,000.

Bedford, N. C.—Bedford Box Co.'s plant.

Bordeloville, La.—Bordeloville Gin Co.'s cotton gin and school building; loss \$8000.

Chattanooga, Tenn.—Building occupied by Willard Bros. & Holt and Parham Mattress Co.; loss about \$5000.

Culpeper, Va.—Culpeper Hardware & Manufacturing Co.'s planing mill; loss about \$12,000.

Culpeper, Va.—Walters & Covington's planing mills and lumber factory; loss \$12,000.

Dry Fork, Va.—Southern Railway's passenger and freight depot; loss about \$6000; D. W. Lum, chief engineer, Washington, D. C.

Fort Payne, Ala.—Alabama Coopers Co.'s plant.

Frederick, Okla.—Chickasha Cotton Oil Co.'s mill destroyed by cyclone; loss about \$60,000.

Jackson, Miss.—H. Risher's drug store and bakery; loss about \$12,000.

La Grange, Ga.—W. W. Turner's residence; loss about \$10,000.

Louisburg, N. C.—Louisburg Mattress Co.'s plant; loss about \$3000.

Mineral Wells, Texas.—Bridge across Brazos river in Palo Pinto county washed away; loss \$18,000. Address County Commissioners.

New Orleans, La.—American Oriental Importing Co.'s store; loss \$50,000.

Pearson, Ga.—Middlebrooks Lumber Co.'s sawmill near Pearson; loss about \$3000.

Petrolia, Texas.—Morgan Jones' hotel; loss about \$5000.

Slanesville, W. Va.—John Chapman's flour and planing mill; loss \$5000.

Staunton, Va.—Mrs. Reeves Catt's lime-kiln.

Vosburg, Miss.—J. T. Childers' shingle mill; loss \$2000.

Washington, D. C.—E. F. Droop & Sons' music store building, 923-925 Pennsylvania avenue; loss about \$60,000.

BUILDING NOTES APARTMENT-HOUSES

Austin, Texas.—University Apartments Co. incorporated with \$20,000 capital stock by A. O. Watson, J. B. Pope and Franz Fiset.

Baltimore, Md.—Telfair W. Marriot, 323 North Charles street, recently mentioned to remodel dwelling at 804 North Calvert street as apartment-house, has had plans prepared by F. E. Beall, 213 St. Paul street, Baltimore; Louis R. Servary, 295 Ingleside avenue, Baltimore, contractor.

Baltimore, Md.—Jordan Drug Co., William E. Jordan, proprietor, Clifton avenue and 12th street west, awarded contract to Charles T. France, Penhurst and Laredo avenues, for erection of store and apartment-house at Garrison and Clifton avenues, Walbrook; three stories; 40x58 feet; cost \$11,000. Wesley L. Minor, 20 Clay street, Baltimore, prepared plans.

Birmingham, Ala.—I. Adler will erect \$10,000 apartment-house; plans by J. W. McClain, 213½ North 20th street, Birmingham; four flats; hot-air heating; electric lighting; contracts to be let separately.

Charleston, S. C.—J. D. Newcomer, Charleston, has prepared plans for apartment-house; site 63x73 feet; three stories; brick; hardwood finishings; seven rooms to each floor; freight elevator.

Oklahoma City, Okla.—J. L. Wyatt will erect apartment-house; two stories; brick; cost \$10,000.

Richmond, Va.—Matthew Gilmour awarded contract to P. J. White, 1110 Main street, Richmond, for erection of apartment-house 50x100 feet; probably hot-water heat (contract not let); gas and electric lighting; cost \$15,000; plans by W. B. Newell, Richmond.

Roanoke, Va.—Roanoke Apartment Corporation incorporated to erect apartment-house; four stories; brick and stone; four apartments on each floor, making total of 16; each apartment to have private bath and hall; main halls to be seven and one-half feet wide; steam heat; basement to contain 16 private storerooms; estimated cost \$40,000; Dr. Joseph A. Gale, president; Taylor Gleaves, vice-president; Hill Tucker, secretary-treasurer.

Savannah, Ga.—N. J. Burney, 124 Gaston street, owner, is making plans for two or three apartment buildings, six rooms each, with extra bath on each floor; ordinary construction; concrete block; electric lighting; cost \$10,000; bids to be awarded August 1, 1908, or April, 1909.

St. Louis, Mo.—Stanford Investment Co. sublet contracts for apartment-houses recently mentioned; plans by A. Blair Ridington, 620 Chestnut street, St. Louis, Mo.; eight buildings, three stories each, with six apartments; ordinary construction; low-pressure steam heat.

Washington, D. C.—C. R. Cranmer awarded contract to J. H. Grant, 5949 Brightwood avenue N. W., Washington, to erect three two-story apartment-houses, to cost \$3000 each; plans by N. R. Grimm, 627 F street N. W., Washington.

Washington, D. C.—Harry Wardman, builder, 1333 G street N. W., contemplates soon beginning erection of six three-story apartment-houses at 2532 to 2550 14th street N. W. and two at 1419 to 1421 Clifton street N. W.; estimated cost \$110,000. A. H. Beers, 1333 G street N. W., prepared plans. (Recently mentioned to erect apartment-houses facing on 14th street.)

BANK AND OFFICE BUILDINGS

Alexandria, Va.—Vogt & Morrell, Corcoran Building, Washington, D. C., prepared plans

for First National Bank building recently mentioned; bids to be opened June 4; fireproof building; 42x73 feet; white marble front; bronze, copper, etc., used in doors, grilles and roof; hot-water heat; electric and gas lighting; cost \$50,000.

Austin, Texas.—American National Bank will erect building; five stories; frontage 60 feet; brick and stone.

Baltimore, Md.—Citizens' National Bank, William H. O'Connell, president, Pratt and Hanover streets, has plans by Joseph Evans Sperry, Calvert Building, Baltimore, for addition to building; two stories; 40 feet square; facade of white marble; fireproof; hot-water heat; electric and gas lighting; cost \$20,000. Plans will soon be distributed for estimates and following contractors will bid: Benjamin F. Bennett, 123 South Howard street; Morrow Bros., 218 West Saratoga street; J. Henry Miller, 110-112 Dover street; John Hiltz & Sons Company, 3 Clay street; Edward Brady & Son, Cathedral and Howard streets; Edward Watters & Co., 532 St. Paul street, all of Baltimore.

Baltimore, Md.—Maryland Casualty Co., John T. Stone, president, Baltimore & North streets, is preparing to erect addition to building; 39x308 feet; cost about \$70,000; plans by Otto G. Simonson, American Building, Baltimore. (Previously mentioned.)

Birmingham, Ala.—John P. Farley of Aniston, Ala., awarded contract to E. M. Lisle & Co. of Birmingham for erection of proposed bank and office building; plans by H. D. Breeding, Birmingham; building 50x100 feet; six stories and basement; steel frame; fireproof; steam heat; electric lighting; electric elevators; cost \$80,000.

Chattanooga, Tenn.—First National Bank awarded contract to J. M. Walker, 617 Weaver street, Chattanooga, for remodeling and repairs to bank building recently mentioned; cost \$20,000; plans by Bearden & Foreman, Chamberlain Building, Chattanooga.

Columbus, Miss.—First State Bank building, contract for which was recently noted awarded to J. W. Stansel, Columbus, will be four-story steel structure; fireproof; brick; steam heat; electric lighting; electric alternating elevators; cost, \$60,000; building for bank, shops and offices. (See "Machinery Wanted.")

Fincastle, Va.—Bank of Fincastle awarded contract to R. A. Figgatt, Roanoke, Va., to erect bank building 29x45 feet; brick; safety vault.

Jacksonville, Fla.—W. A. Bisbee has had plans prepared by H. J. Klutho, Board of Trade Building, Jacksonville, and will soon award contract for erection of office building; fireproof; ten stories, 28x35 feet; reinforced concrete construction; front of Georgia marble, with window frames and cornices of copper; first floor to have storeroom about 19x30 feet, with plate-glass front; corridor on this floor will be seven feet wide and lined on both sides with English veined Italian marble wainscoting six feet high, and have ceiling decorated with plaster cornices and electric lights; each floor (except first) will contain six offices and toilet-room fitted with marble stalls and wainscoting; all corridor floors to be of marble and mosaic; interior finish to be of quartered oak finished in dark brown English oak; will be equipped with system of piping for furnishing ice-water to offices, two elevators and vacuum cleaning system; contract for reinforced concrete work awarded to Southern Ferro-Concrete Co., Atlanta, Ga.

Kitzmillersville, Md.—First National Bank, R. A. Smith, president, is having plans prepared for bank building; two stories; brick and stone; burglar and fireproof vaults; cost about \$8000.

Montgomery, W. Va.—Montgomery National Bank building, contract for which was recently noted awarded to A. F. Withrow & Co., Charleston, W. Va., will be erected at cost of \$14,000; two stories, 40x56 feet; mill construction; brick; enameled brick facings; terra-cotta cornice; architect, Chas. Rabenstein, Charleston; heating not included in contract.

Mountain View, Okla.—L. C. West, H. A. Lamberson and S. M. Coker awarded contract to John Wenderott, Mountain View, for erection of proposed bank and store building; plans by A. A. Crowell, Enid, Okla.; one-story brick building, 100x100 feet; cost \$11,000.

Paducah, Texas.—First State Bank will erect \$5000 bank building.

Wilton, Ark.—Bank of Wilton, W. C. Greening, president, will erect bank building.

CHURCHES

Alexandria, La.—J. M. Brown, Houston, Texas, has contract to erect temple for Jewish congregation at \$27,100.

Amite, La.—Baptist church will erect edifice to cost from \$6000 to \$8000; architect not engaged. Building will be 76x80 feet; electric lighting; contract awarded about June 20; J. R. G. Hewlett, pastor, Osyka, Miss. (See "Machinery Wanted.")

Carrollton, Miss.—Mater Dolorosa Church awarded contract to W. O. Erwin of New Orleans, La., at \$50,978 for construction of edifice.

Columbus, Ga.—Methodist congregation, Rev. C. T. Clark, pastor, will erect edifice 44x80 feet; plans by T. W. Smith & Co., Columbus, Ga.

Columbus, Ga.—Christian congregation pastor, Rev. H. W. Elder, will superintend construction of edifice recently mentioned; no contract; plans by W. T. Smith & Co., Columbus; brick building; main auditorium 36 x36 feet; Sunday-school rooms, 20x46 feet; tower; heating not decided; electric lighting; cost above \$5000. (See "Machinery Wanted.")

Memphis, Tenn.—Emanuel Episcopal Church, Rev. E. T. Denby, rector, will erect edifice to cost about \$20,000.

Palatka, Fla.—Baptist church will build edifice as reported recently; 75x85 feet; cement blocks and tile roof; hot-air or steam heat; electric-lighting fixtures; cost \$10,000; architects, Stenson & Puff; date of opening bids not decided.

Sumter, S. C.—Church of the Holy Comforter awarded contract to J. J. Cain, Columbia, S. C., for erection of edifice; gothic architecture; stucco finishing; cost between \$12,000 and \$15,000, exclusive of furniture, heating or lighting fixtures; plans by Edwards, Walter & Farnham, 631 Candler Building, Atlanta, Ga.

Sumter, S. C.—Church of Holy Comforter, Rev. H. H. Covington, pastor, awarded contract to John J. Cain, Columbia, S. C., to erect edifice to cost about \$16,000.

Vicksburg, Miss.—Protestant Episcopal Church will build edifice after plans and specifications by Deluys, Churchill & Labouisse, New Orleans, La.

Waynesboro, Va.—Presbyterian congregation will erect \$15,000 edifice; plans being prepared. Address The Pastor, Presbyterian Church.

COURTHOUSES

Houston, Texas.—Lang & Wittichell, Dallas, Texas, are completing plans for Harris county's courthouse, and will be ready to advertise for bids about June 15; structure will be four stories; 134x180 feet; fireproof; basement of concrete to ground line, reinforced with steel bars; exterior walls of Texas granite and St. Louis hydraulic pressed brick; roof of terra-cotta tile, laid in cement; two passenger elevators and fireproof steel vault; bond issue of \$500,000 has been voted; A. E. Amerman, county judge. (Further details previously mentioned.)

DWELLINGS

Baltimore, Md.—Green Spring Park Co., Frederick H. Baumann, president, 619 Gathier Estate Building, will erect cottages to cost \$4000 to \$10,000 each, or bungalows from \$3500 to \$5000 each; Thos. R. Bond, secretary and treasurer. (See "Miscellaneous Enterprises.")

Baltimore, Md.—Frank Novak, 2800 Jefferson street, will erect 42 dwellings on Kenwood avenue between Orleans and Jefferson streets; two stories, 14x46 feet; ornamental-brick construction; furnace heat; cost \$53,000.

Baltimore, Md.—Forest Park Company, W. H. Martin, secretary-treasurer, Maryland Telephone Building, awarded contract to J. F. Hardy, Groveland and Eldorado avenues, Baltimore, to erect dwelling on Brookland avenue between Berwen and Garrison avenues; two stories and attic; 25x42 feet; frame; ordinary construction; steam heat; cost about \$5000.

Birmingham, Ala.—H. L. Zell will erect residence; plans by W. E. Spink, Title Guarantee Building, Birmingham; building 35x60 feet; frame; hot-air heating; gas lighting; cost \$5000.

Birmingham, Ala.—Terrence Mackin will erect \$6000 residence; plans by W. E. Spink, Title Guarantee Building, Birmingham; building 35x52 feet; brick veneer; hot-water heat; gas lighting.

Birmingham, Ala.—Church of Advent will erect \$12,500 parish house. Contract has been signed and construction begun; E. M. Tutwiler and J. W. McQueen, building committee.

Chattanooga, Tenn.—G. N. Henson, care of Citizens' Bank & Trust Co., awarded contract to W. C. Collins, 408 Beech street, for erection of residence noted in April; two stories

and basement; red pressed brick; slate roof; hot-water heat; plans by R. H. Hunt, Chattanooga.

Chattanooga, Tenn.—J. H. Atwater will erect six brick dwellings.

Chattanooga, Tenn.—J. T. and C. C. Dugger will erect three dwellings.

Clarksburg, W. Va.—O. R. Sartor will erect 10-room residence; plans by Gladden & Alexander, Irwin Building, Clarksburg; frame building, 32x40 feet; two stories and basement; concrete-block foundation; concrete floors; slate roof; wood cornice; door hangers; tiling for mantels and bathroom; hard plaster; corner beads; lighting fixtures; sheet and art glass; wood mantels; colonial porch columns; bathtub, lavatories; closets; laundry tubs; gas heating; gas and electric lighting; cost \$6000; bids received by architects until June 6.

Columbia, Tenn.—J. A. Sloan will erect residence; concrete block; steam heat; hardwood finish; cost about \$10,000.

Columbia, Tenn.—Mrs. A. F. Brown will award contract June 15 for erection of proposed dwelling; plans by Carl Atkinson, Brown block, Columbia; seven-room building; buff brick veneered; hot-water heat; cost \$5500; bids asked; separate contracts for heating, electric wiring, plumbing, excavation and stone foundation. (See "Machinery Wanted.")

Columbia, Tenn.—J. A. Sloan will erect 10-room dwelling; architect not selected; building, pressed brick with stone trimmings, or concrete block; steam heat; hardwood; slate roof; cost \$10,000.

Elberton, Ga.—Dr. A. S. Hawes awarded contract to W. H. Roberts, Elberton, to erect two-story residence; plans by W. E. Wallis, Elberton.

Memphis, Tenn.—J. W. Campbell awarded contract to M. B. Pell to erect residence; two stories; nine rooms; brick veneered; slate roof; to cost about \$6000.

Memphis, Tenn.—John J. Hughes, Taynes, Ark., will erect apartment-house; four apartments of seven rooms each; cost \$13,000.

Memphis, Tenn.—Mrs. J. J. Williams, 2062 Southern avenue, will erect bungalow mentioned in May; plans by Boone & Johnson, Memphis; contractor, Martin Gallagher, Memphis; building nine rooms and basement; hot-air heating; electric lighting; cost \$6000.

Norfolk, Va.—Henry C. Hofheimer awarded contract to J. D. Anders, Norfolk, to erect brick residence; cost \$12,000.

Orange, Texas.—Mrs. Lausen has had plans prepared by H. C. Banker, Orange, for residence to replace one destroyed by fire; two stories; 36x100 feet; brick.

Richmond, Va.—T. Crawford Redd, 1017 Bank street, awarded contract to Quarles & Palmore, Richmond, for erection of \$10,000 residence at Ginter Park; plans by owner; colonial structure; three stories; 40x40 feet; framed storm-sheathed construction; hot-water heating; electric lighting.

Richmond, Va.—Leon Wallerstein will erect brick residence to cost \$10,000.

Richmond, Va.—H. S. Binswanger will erect dwelling; brick; cost \$10,000.

Richmond, Va.—E. Lee Roden will erect \$5000 residence at Ginter Park; 10 rooms; ordinary construction; steam heat; electric lighting; contract to be awarded within few months.

Richmond, Va.—Alexander F. Ryland awarded contract to W. P. Gallespie, Richmond, for erection of \$5500 residence at Ginter Park; plans by W. L. Carneal, Richmond; ordinary construction; hot-water heat; electric lighting.

Roland Park, Station 1, Baltimore, Md.—Samuel E. G. Wilmer, 3000 Clifton avenue, Baltimore, awarded contract to B. F. Bennett Engineering Co., 123 South Howard street, Baltimore, to erect residence in Roland Park; two and one-half stories; 30x47 feet; ordinary frame-shingle construction; hot-air furnace heat; electric lighting; plans by Archer & Allen, Central Savings Bank Building, Baltimore. (Mentioned in April.)

Tampa, Fla.—A. C. Clewis has had plans prepared by A. H. Johnson, Tampa, for residence to cost \$25,000; contract for building brick foundation and basement awarded to Aulick & Darrett, Tampa.

Tampa, Fla.—Currie J. Hutchinson will erect two-story ten-room residence, to cost about \$9000. Mr. Weightman of Tampa has contract for wood work and Friend & Gattman of Tampa for brick work.

Washington, D. C.—C. Sorme awarded contract to W. C. Blundon, 30 Quincy place, Washington, to erect two dwellings at 1361-63 Park road; two stories; brick; cost about \$10,000; plans by Hunter & Bell, 518 10th street N. W., Washington.

Washington, D. C.—C. D. Willis awarded contract to John Simpson's Sons, Forest Glen, Md., to erect dwelling at 3312 Newark street N. W.; three stories; frame; cost about \$7000; plans by F. B. Pyle, Equitable Building, Washington.

Washington, D. C.—Mrs. Henrietta Hollday is having plans prepared by Wm. P. Cresson, 1517 H street N. W., Washington, for residence; 65 feet frontage; Indiana limestone; four stories; exterior of top floor to be of slate.

Washington, D. C.—Potomac Realty Co., recently mentioned as having plans prepared by Bruce Price & De Silbourn, 1135 Broadway, New York, for residence, will erect structure 27x109 feet; English style of architecture; base of granite and entire upper part of front to be of stone; 24 rooms and eight baths.

Washington, D. C.—E. S. and W. M. Kennedy of Kennedy & Davis, 1413 G street N. W., will erect about 20 dwellings; plans have been prepared for five, which will be three stories; colonial design, 24 feet front; hot-water heat, tiled baths, electric lights.

HOTELS

Asheville, N. C.—Lowenberg Corporation, Norfolk, Va., it is reported, contemplates erecting fireproof hotel in Asheville.

Augusta, Ga.—United States Improvement & Investment Co. of New York city, represented by A. H. Thatchler of Augusta, has, it is reported, secured option on site on which to erect hotel costing \$1,000,000.

Bennettsville, S. C.—Plans for proposed McCall Hotel will be ready June 10; bids received about July 1; architects, Wilson, Sompayrac & Urquhart, Columbia, S. C.; building, three stories and basement; 35 rooms; brick; tin roof; wood floors and partitions; hard plaster; tile floors; wood columns, interior and exterior; steam heat; plumbing; steel tank and tower; artesian well; deep-well pump; fire protection; cost of building, \$35,000.

Big Stone Gap, Va.—Normal Hotel Co. incorporated with \$15,000 capital stock; H. S. Shanklin, president; R. Horneck, vice-president; R. P. Barron, secretary and treasurer.

Eldorado, Ark.—S. J. Harris, Ruston, La., proposes erection of hotel in Eldorado; three stories; 40 rooms; brick; cost \$25,000.

Greensboro, N. C.—Guilford Real Estate Co., lessee of Guilford Hotel, has awarded contracts for erection of proposed four-story addition; improvements will include new lobby, 54x59 feet, central part of roof over which will be of glass; floors of halls on ground floor, dining-room and lobby of Venetian mosaic and walls of marble; two passenger elevators; hot and cold water; electric lights; steam heat; lighting and heating will be supplied from plant in Benbow Building. L. J. Brandt is president, and R. C. Glenn, secretary-treasurer. Plans for remodeling are by John Kevan Peebles, Norfolk, Va.

Washington, D. C.—George Peabody Eustis, owner of Arlington Hotel, Vermont avenue and H street N. W., recently mentioned, is having plans prepared by Bruce Price & De Silbourn, 1135 Broadway, New York, for erection of hotel to replace the Arlington; new structure to cost about \$2,500,000.

MISCELLANEOUS STRUCTURES

Alexandria, Tenn.—Store Building.—Dr. S. McMillon awarded contract to J. L. Richards of Alexandria for store building.

Annapolis, Md.—Clubhouse.—Annapolitan Club has had plans prepared by P. B. Cooper, Annapolis, for clubhouse; 32x44 feet; two stories and basement; brick.

Argenta, Station Little Rock, Ark.—Orphanage.—Hugh McLennon, Chicago, Ill., is lowest bidder at \$85,000 to erect St. Joseph's Orphanage; 100x200 feet; plans by Charles L. Thompson, Arkansas Building, Little Rock, Ark. (Mentioned in April.)

Baltimore, Md.—Asylum.—Joseph Schamberger, 2122 East Baltimore street, Baltimore, submitted lowest bid at about \$18,000 to build tuberculosis ward at Bayview Asylum; Edward D. Preston, Building Inspector, City Hall. (Recently mentioned.)

Baltimore, Md.—Store Building.—William A. Flamm of William A. Flamm & Co., 126 North Calhoun street has plans by John Freund, Jr., 210 East Lexington street, Baltimore, for improvements to store building at 37 West Lexington street, including new front and remodeling of interior. Entrance will have marble and tile floor; windows to be of polished plate, with mirrored paneling and parquetry flooring. John Hughes, Jr., of John Hughes, Jr., Company, 104 East Saratoga street; Thomas B. Stansfield & Son,

109 Clay street; Henry L. Maas, 906 Alsquith street; R. N. McCulloh & Co., 118 East Lexington street; James Worthington, 406 North Howard street; Henry S. Rippel, 17 Clay street, all of Baltimore, will submit estimates.

Beeville, Texas.—Business Building.—J. S. Hall & Bro. awarded contract to Roger McGraw, Victoria, Texas, to erect business building; two stories and basement; 66x110 feet; glazed-brick front; cost about \$9000.

Berkley, Va.—Business Building.—D. Liebsch and J. C. Haskett will erect brick business building to replace burned structure.

Charleston, S. C.—Nurses' Home.—William Martin Alken of Charleston has submitted plans to board of directors of Roper Hospital for nurses' home.

Chattanooga, Tenn.—J. L. McJenkin, Chattanooga, has prepared plans and begun construction of proposed Harrington Building, to cost \$25,000.

Chattanooga, Tenn.—Stable.—Algernon Blair, Montgomery, Ala., has contract to erect Government veterinary stable at Fort Oglethorpe; pressed brick; steam heat; cost about \$18,000.

Chester, S. C.—Postoffice.—Blue Ridge Construction Co., Asheville, N. C., is lowest bidder at \$31,000 for erection of U. S. Postoffice at Chester; Congress has appropriated \$50,000, of which \$8,503.24 has been expended for site; James Knox Taylor, Treasury Department, Washington, D. C., is Supervising Architect. (Mentioned in April.)

Columbia, S. C.—Soldiers' Home Building. South Carolina Soldiers' Home will erect frame building, with steam heating and plumbing; plans ready June 1; bids received June 15; architects, Wilson, Sompayrac & Urquhart, Columbia.

Columbia, S. C.—Home.—Bids will be received until June 16 for erection of frame building for Confederate Veterans' Home; plans and specifications with Wilson, Sompayrac & Urquhart, architects, Columbia; J. Q. Marshall, chairman.

Fort Caswell (not a postoffice), N. C.—Barracks.—Government buildings at Fort Morgan and Fort Caswell, for erection of which Joseph Schad, Wilmington, N. C., was recently noted as lowest bidder, will be as follows: One building of concrete; two buildings, solid concrete foundations, frame superstructure; all slate roof; for lavatory, mess hall and barracks; ordinary fireproof construction; hot-water heat; electric lighting; cost about \$90,000; Louis P. Garrard, Captain and Quartermaster, U. S. Army, Mobile, Ala.

Gainesville, Fla.—Lodge Building.—Masonic lodge awarded contract to Eddins Manufacturing Co., Gainesville, to erect temple; brick and stone; two stories; 40x80 feet; tile roof; steam heat; gas and electric lighting; cost \$15,000; plans by J. H. Hawkins, Jacksonville, Fla. (See "Machinery Wanted.")

Harrisonburg, Va.—Lodge Building.—Harrisonburg Lodge No. 450, B. P. O. Elks, will award contract within next 30 days for erection of home and club building recently mentioned; plans by Heatwole & Hedrick; ordinary brick building; colonial; three stories; 58x70 feet; steam heat; electric lighting; Wm. F. Fultz, secretary, Harrisonburg.

Hinton, Okla.—Business Building.—C. W. Simmons awarded contract to Chas. Teppie, Anadarko, Okla., for erection of two-story brick business building; plans by A. T. Simmons, Bloomington, Ill.; fireproof structure, 80x5 feet; lighting not decided; cost \$5500.

Kearneysville, W. Va.—Sun Parlor.—F. O. Trump will build sun parlor on 18x36 feet concrete building; parlor to be of structural steel and glass, for which suggestions and prices are invited; will also install 6x8-foot elevator to be operated about 44 feet by water-power. (See "Machinery Wanted.")

Lebanon, Tenn.—Sanatorium.—Managers of Cedarcroft Sanatorium are having plans prepared for erection of building.

Lexington, Va.—Hospital and Science Buildings.—Virginia Military Institute will open bids about June 20 for hospital building recently mentioned; date for opening bids for erection of applied science hall not yet fixed; hospital, two stories, cost \$9000; science building, four stories, cost \$25,000. E. W. Nichols, acting superintendent, Lexington, will receive competitive plans for hospital building until June 5, and for applied science building until June 20.

Little Rock, Ark.—Library.—Little Rock Public Library Association, contract for which was recently noted awarded to W. R. Stewart, Little Rock, has not yet let contract for furniture; estimated cost of building, without furniture, \$76,000; S. W. Reynburn, treasurer. (See "Machinery Wanted.")

Louisville, Ky.—Dining-rooms and Barns.—Kentucky State Fair Commission, 320 Paul Jones Building, will erect two dining-rooms, 100x40 feet each, and 30 barns; estimated cost \$20,000; J. W. Newman, secretary. (Recently mentioned.)

Memphis, Tenn.—Hospital.—Tri-State Hospital invites architects to submit competitive plans until June 10 for three-story building, to contain about 50 rooms; details on application; George C. Ehemann, secretary, 1391 Tennessee Trust Building.

Monroe, La.—Store Building.—S. Kaplan will erect store building recently noted; two stories and basement; 70x156 feet; reinforced concrete; wood interior; steel ceiling; electric lighting; electric combination freight and passenger elevator; cost from \$15,000 to \$18,000; architect and contractor not engaged; expert concrete constructor may be employed as superintendent. (See "Machinery Wanted.")

Mount Vernon, Mo.—Sanatorium.—Missouri State Sanatorium, Dr. J. L. Eaton, president, and W. L. Gupton, secretary, will award contract June 13 for (1) erection of power-house, concrete tunnel and conduit; (2) equipment of power plant, electrical lighting and heating system; (3) plumbing, medical building; plans and specifications on file at Institution, Room 53, Victoria Building, St. Louis, Mo., and H. H. Hohenschild, architect, Rolla, Mo.

New Orleans, La.—Business Building.—Equitable Real Estate Co., Emilian Perrin, president, will rebuild recently reported burned structure occupied by American Oriental Importing Co.; building to be five stories high and cost \$40,000.

New Orleans, La.—Clubhouse.—New Orleans Chess, Checkers and Whist Club will erect building to cost about \$200,000; Diboll, Owen & Goldstein will probably prepare plans.

New Orleans, La.—Store Building.—Otto Walther, New Orleans, has contract to erect five-story structure for Tulane Educational Board, reproducing burned Stevens Building.

New Orleans, La.—Store Building.—C. C. Cordill is having plans prepared by Toledano & Wogan, New Orleans, for store building to replace one recently burned; steel frame; fireproof.

Oklahoma City, Okla.—Store Building.—W. H. Shellenberger will erect \$8000 brick store building.

Roland Park, Station L, Baltimore, Md.—St. Mary's Female Orphan Asylum, Cold Spring lane, Roland Park, will erect addition; plans by Francis E. Tormey, 404 Wilson Building, Baltimore, are distributed among contractors. Bidders include J. J. Walsh & Sons, 1525 Maryland avenue, and Edward Brady & Son, 1109-1113 Cathedral street, both of Baltimore.

Taylor, Texas.—Platform.—District Farmers' Union, J. N. B. Williams, president, contemplates erecting cotton platform.

Washington, D. C.—Nurses' Home.—Georgetown University Hospital, 35th and N streets N. W., awarded contract for erection of nurses' home to cost about \$5000.

Washington, N. C.—Business Building.—Miss Lida T. Rodman awarded contract to W. C. Miller, Washington, to erect two-story brick business building.

Washington, D. C.—Workhouse Building.—Bids will be asked for erection of District of Columbia workhouse administration building recently noted and described; building, 75x75 feet; four stories; brick; steel roof construction; reinforced concrete columns and floors; fireproof; blower system heating; electric lighting; cost, \$80,000; consulting engineer, F. L. Averill, 719 Union Trust Building, Washington, D. C.; plans drawn in office of Building Inspector Ashford, District Building.

Washington, D. C.—Hospital.—Sealed proposals in duplicate will be received at Department of Interior, Washington, D. C., until July 2 for erection of assembly hall at Government Hospital for Insane in accordance with drawings and specifications to be inspected at Department; bidders invited. Proposals must be marked "Proposals for Assembly Hall, Government Hospital for the Insane." Frank Pierce, acting Secretary.

Weatherford, Texas.—Sanatorium.—Plans have been prepared for Bergman Sanatorium; building of frame; cost \$20,000.

Wheeling, W. Va.—Y. M. C. A. Building.—Young Men's Christian Association awarded contracts for erection of Y. M. C. A. building as follows: N. C. Hamilton & Sons, brick work; T. W. Jackson, stone work; W. W. Wood Company, wood work and plastering; Riverside Bridge Co., structural steel work; building 100x100 feet; five stories; mill construction; contracts not awarded for steam heating and electric plants; elevator;

plans by Glesey & Faris, Wheeling; cost \$110,000. (Mentioned in February.)

Winchester, Ky.—Lodge Building.—Knights of Pythias and Lodge of Masons accepted plans by Cincinnati (Ohio) architects for building; three stories; brick and stone; first floor to contain two storerooms; second, 16 offices, and third, lodgerooms; cost about \$15,000. (Recently mentioned.)

MUNICIPAL BUILDINGS

Baltimore, Md.—Buildings.—Board of Awards has opened bids for erection of athletic and field buildings at Latrobe Park; James F. Farley, Franklin Building, Baltimore, lowest bidder at \$6275.

Henderson, N. C.—Building.—Hill C. Linthicum, Durham, N. C., has been selected architect for municipal building at Henderson.

Petersburg, Va.—Jail.—G. B. Keeler & Son of Petersburg are lowest bidders at \$9736 for remodeling city jail, and Van Dorn Iron Works, Cleveland, Ohio, is lowest bidder at \$11,457 for iron work; improvements include removal of interior walls, new floor and roof of reinforced concrete and steel cells. (Recently mentioned.)

Roanoke, Va.—Fire Station.—A. L. Marsh, Roanoke, was lowest bidder at \$10,846 for erection of fire station; plans will probably be revised, so that cost will be reduced to \$10,000.

RAILWAY STATIONS

Fort Worth, Texas.—St. Louis Southwestern Railway of Texas, F. H. Britton, president, St. Louis, Mo., will, it is reported, erect freight depot and terminals at Fort Worth, expending about \$500,000.

SCHOOLS

Alexandria, Va.—School Board will probably ask bids about June 15 for erection of school building recently noted; plans by C. M. Robinson, Richmond, Va.; building about 125x70 feet; 16 rooms; brick and reinforced concrete; hot-air heating; ventilation; gas and electric lighting; cost about \$30,000.

Baltimore, Md.—Board of Awards, J. Barry Mahool, president, will receive bids until June 10 at office of J. Sewell Thomas, City Register, City Hall, for furnishing Board of School Commissioners, John H. Roche, secretary, with portable schoolhouses. Specifications on file at office of School Commissioners, Madison and Lafayette avenues; certified check, \$250.

Baltimore, Md.—City has accepted plans by Theodore W. Pietsch, American Building, Baltimore, for school building at Mulberry and Payson streets, to cost \$60,000, and those of Otto G. Simonson, American Building, Baltimore, for school building on Reisterstown road, to cost \$44,000. (Mentioned in April.)

Bluefield, W. Va.—Board of Education will open bids June 3 for erection of high-school building recently described; semi-fireproof construction; direct-steam heat; fan ventilation; electric lighting; cost \$100,000; plans by W. E. & E. L. Shufelbarger, Bluefield, W. Va., and Mills & Pruett, Columbus, Ohio.

Buda, Texas.—City will erect \$10,000 school building. Address The Mayor.

Capitol Hill, Okla.—St. Joseph's Academy is planning to erect addition to school building costing about \$20,000.

Center, Ala.—County High School Board will award contract June 3 for erection of high-school building recently mentioned; two stories; 50x83 feet; ordinary construction; cost \$12,500; architect, H. D. Breeding, Birmingham, Ala.

Clarksdale, Miss.—City will let contract June 16 for erection of brick school building noted in April; two stories and basement; about 90x120 feet; brick; slate roof; steam heat; electric lighting; cost \$25,000; plans by P. J. Krouse, Meridian, Miss.; bids are asked. Oscar Carr, Clarksdale, may be addressed.

Columbia, S. C.—University of South Carolina will have plans ready June 15 for building mentioned in March; bids received July 15; building, brick and stucco; tin roof; wood floors; plumbing; slate blackboards; indirect steam heat; blower ventilation; architects, Wilson, Sompayrac & Urquhart, Columbia; university to erect 25 buildings, costing \$1,500,000; only one building provided for by present appropriation.

Crawfordville, Ga.—City will vote on \$10,000 bond issue to erect brick school building. Address The Mayor.

Denison, Texas.—City will vote June 30 on special tax levy to erect \$53,000 school building. Address The Mayor.

Douglasville, Ga.—City will vote July 7 on

\$15,000 bond issue for erection of school building. Address The Mayor. (Recently mentioned.)

Elmer, Okla.—City has voted \$10,000 of bonds for erection of brick school building. Address The Mayor. (Recently mentioned.)

Elyton, Postoffice Birmingham, Ala.—Frank W. Smith, Mayor, will receive plans until June 15 at 508 Brown-Marx Building, Birmingham, Ala., for two fireproof school buildings, one to contain not less than 10 rooms and cost not more than \$25,000, and other to contain not more than four rooms and cost not exceeding \$7000; plans to be submitted without cost to Elyton. (City mentioned in April as voting \$75,000 of bonds.)

Fort Worth, Texas.—City awarded contract to Weeks & Bushnell, Arlington, Texas, at about \$30,000 to erect school building in North Fort Worth; two stories and basement; brick.

Girard, Ala.—City has voted \$10,000 of bonds to erect school building. Address The Mayor.

Greeleyville, S. C.—Williamsburg county has voted bonds for erection of \$7000 school building. Address County Commissioners.

Gulford College, N. C.—Gulford College will erect \$18,000 library building; L. L. Hobbs, president.

Hartsville, S. C.—Coker College will erect administration building and auditorium; plans by Wilson, Sompayrac & Urquhart, Columbia, S. C., to be ready June 15; bids received July 15; brick building; tin roof; wood floors and partitions; hard plaster; steam heat; plumbing; opera chairs; school desks; cost \$25,000.

Hixson, Tenn.—Bids will be received at courthouse, office of J. B. Brown, Superintendent of County Schools, Chattanooga, Tenn., until June 12 for erection of school building at Hixson; plans and specifications on file at office of Adams & Alsop, 33-35 Chamberlain Building, Chattanooga, Tenn.; blank proposal forms furnished by architects; certified check, \$500, payable to J. A. Hargrave, chairman Joint Board of Education of Hamilton county. (Recently mentioned.)

Holly Hill, S. C.—City has voted bond issue to erect school building. Address The Mayor.

Limestone, Tenn.—Bethesda Industrial Institute, Rev. William T. Morgan, president, has begun erection of academic building; three stories high, with accommodations for from 500 to 700 children, and cost about \$22,000; foundation of Girls' Home has been laid, which will be two stories and basement and accommodate about 50 girls; office building is nearing completion; six other buildings will also be erected; entire institution as planned will cost about \$130,000. (Mentioned in April.)

Mena, Ark.—City will erect school building; James D. Shaver, president School Board.

Millington, Tenn.—City has had plans prepared for school building; brick; two stories; contain study hall and seven classrooms. Address The Mayor.

Montevallo, Ala.—Alabama Girls' Industrial School will erect building for power plant; 40x50 feet; semi-fireproof; cost \$10,000; plans by W. E. Spink, Title Guarantee Building, Birmingham, Ala. Address T. W. Palmer, president, Montevallo.

Mt. Washington, Md.—Station, Baltimore, Md.—School Commissioners will let contract possibly by June 15 for school building recently described; fireproof construction; reinforced-concrete floors; steam heat; electric lighting; cost about \$25,000; plans by Owens & Sisco, Continental Building, Baltimore.

Odenville, Ala.—St. Clair County High School Board adopted plans by Frank Lockwood, Montgomery, Ala., for school building at Odenville to cost \$10,000. Plans will be altered and bids invited.

San Antonio, Texas.—Construction has begun on proposed building for Bonn Avon School on Oakland street; two stories, basement and attic; basement will contain heating plant, coal bins, laundry, servants' and janitors' quarters; front entrance loggia to be tiled and be approached by three sets artificial stone steps; cost about \$15,500; plans by A. A. Herff of San Antonio.

Stephenville, Texas.—John Tarleton College awarded contract to Oates & Holderness, Stephenville, to erect Mary Corn-Wilkerson dormitory, to cost \$10,000.

Stillwater, Okla.—Board of Education will construct school building mentioned in March; C. O. Edgerton, City Clerk.

Tazewell, Va.—City of Tazewell will unite with Jeffersonville School District of Tazewell county to erect school building in Tazewell; cost \$15,000 to \$20,000; city to vote on

\$12,000 bond issue June 23; E. V. Spotts, Mayor. (Recently mentioned.)

University, Miss.—University of Mississippi will let contract about July 15 for erection of buildings recently noted (under Oxford, Miss.); dormitory and dining hall, three stories; hand elevators; vacuum heating; cost \$75,000; plans by W. E. Spink, Title Guarantee Building, Birmingham, Ala.; power plant, two-story building; plant to be installed to heat and light university buildings and grounds; cost \$35,000; plans by F. G. Proutt, Memphis, Tenn.; buildings mill construction; stack to be of brick, 125 feet high; plans and specifications to be completed about June 15; contract to be let for entire work; D. M. Kimbrough, chairman building committee, Oxford.

Vicksburg, Miss.—Bids addressed to Bishop T. D. Bratton, chairman building committee for Diocesan School of Mississippi, will be received at office of DeBuys, Churchill & Labouisse, Ltd., architects, 817 Hibernia Bank Building, New Orleans, La., until June 22 for erection of Diocesan School at Vicksburg; certified check, \$300; drawings, specifications and proposal forms on file at office of architects, and additional full sets will be furnished on deposit of \$15 each; building to be completed within eight months from date of contract. (Recently mentioned.)

Walkertown, N. C.—Board of Public Instruction, Mr. Spense, superintendent, Winston-Salem, N. C., has had plans prepared by Barrett & Thompson, Raleigh, N. C., for school building; brick or frame; two stories; four recitation-rooms on ground floor and auditorium on second floor.

Washington, D. C.—St. Rose Industrial School, 2023 G street N. W., has had plans prepared by Francis E. Torney, 404 Wilson Building, Baltimore, Md., for erection of industrial school; four stories with basement; 115x150 feet; facade of brick, granite, brownstone and ornamental terra-cotta; interior semi-fireproof; cost about \$150,000; reported that contract has been awarded to J. J. O'Connor, 427 East Lexington street, Baltimore, Md.

Wewoka, Okla.—City contemplates erection of \$15,000 brick school building; bond issue of \$30,000 proposed; balance to be expended in municipal improvements. Address The Mayor.

THEATERS

Baltimore, Md.—Cohen & Hartz, 2 North Liberty street, recently mentioned, have had plans prepared by A. Lowther Forrest, Professional Building, Baltimore, for theater and moving-picture parlor; main building on Custom-house avenue, 88x104 feet; site on Baltimore street is 15 feet 10 inches, and will be used as entrance and lobby; entrance of terra-cotta; auditorium to have balcony and seating capacity of 1200; stage 25 feet deep; tin roof; steam or hot-water heating; ceiling over part of basement containing heating and ventilating equipment; fireproof; steel work protected; cost about \$100,000.

Cherokee, Okla.—Cherokee Building & Improvement Co. incorporated with \$10,000 capital stock by A. J. Titus, Ira Hill and A. H. Stout; will erect two-story brick building, 50x140 feet, at cost of \$10,000; storerooms on first floor; opera-house above; architect, Geo. L. Hockman, Cherokee.

New Orleans, La.—Orpheum Circuit Co., J. Blates, manager, recently noted to make improvements to theater at cost of \$7000, will install new heating plant and chairs and make changes in electrical system; plans not fully made.

Washington, D. C.—Plans have been prepared and contracts signed, it is reported, for erection of theater, of which Joseph E. Luckett, 1110-1112 F street, N. W., will be manager.

WAREHOUSES

Alexandria, Tenn.—O. P. Barry will erect implement warehouse.

Baltimore, Md.—Adams Express Co., H. G. Ransburg, general agent, 501 Union Trust Building, awarded contract to George A. Blake, 301 Law Building, Baltimore, to remodel building at North and Franklin streets; mill construction; 106x50 feet; electric elevator and lighting; steam heat; cost about \$20,000; plans by Theodore W. Pietsch, 1001 American Building, Baltimore. (Previously mentioned.)

Baltimore, Md.—United Fruit Co., Cecil Buckman, manager, 104 East Pratt street, has secured lease of eastern part of Pier No. 1 and will have plans prepared by Otto G. Simonson, American Building, Baltimore; preliminary plans call for office building to contain waiting-rooms, ticket office, etc., warehouse for shipping and receiving merchandise and storage sheds.

Birmingham, Ala.—Harris Transfer & Warehouse Co. awarded contract to G. W. Papot, Birmingham, for erection of warehouse and stable recently noted; cost \$8000.

Burley, Ky.—Burley Warehouse Co. incorporated with \$20,000 capital stock by F. L. Satterwhite, J. M. Bourne, Craig Jones and others.

Florence, S. C.—Farmers' Cotton Holding and Storage Association, recently noted incorporated with J. L. Barringer, president, will establish system of cotton warehouses in South Carolina; T. C. Willoughby, general manager.

Galveston, Texas.—Galveston Elevator & Warehouse Co. contemplates erection of warehouse of 32,000 bushels capacity. (See "Miscellaneous Enterprises.")

Goodman, Miss.—Farmers' Union Warehouse Co. incorporated with \$10,000 capital stock by G. L. Cowser, J. B. Allen and others.

Houston, Texas.—Texas Bag & Fibre Co. will erect warehouse; three stories and basement; brick; 50x50 feet; cost about \$6500.

Jacksonville, Fla.—J. G. Christopher Company has awarded contract to Turner Construction Co., 11 Broadway, New York, for construction of warehouse; 105x105 feet; reinforced concrete; overhead trolley carrying system in 60x105-foot piperoom without posts; metal frames and sash, with wired glass, etc. Christopher Company has also awarded contract to Turner Construction Co. for storage warehouse 157.5x110 feet; three stories high, with basement; reinforced concrete, etc.

Tarboro, N. C.—Tarboro Hardware Co., John R. Pender, proprietor, awarded contract to J. T. Moore, Tarboro, for erection of warehouse; brick and iron; 50x100 feet; cost \$4000. (See "Machinery Wanted.")

RAILROAD CONSTRUCTION RAILWAYS

Atlanta, Ga.—The Atlanta, Griffin & Macon Railway Co. and the Americus & Albany Electric Railway Co., which are controlled by the same interests, have applied for authority to issue \$5,000,000 in stock and \$5,000,000 in bonds for their proposed electric railways between Atlanta and Macon and Albany. W. J. Massee of Macon, president, is reported as saying that the financial plan is approved by the Railroad Commission and that construction will begin immediately.

Baltimore, Md.—The Baltimore & Washington Transit Co. has been granted authority by Congress to build its line into the District of Columbia. The construction immediately proposed is an extension in the suburbs of Washington. Alexander Brown, Henry W. Williams and N. Winslow Williams of Baltimore are said to be interested. H. W. Williams, Fidelity Building, Baltimore, may give information.

Bartlesville, Okla.—The Manufacturers' Record is informed that a resurvey has been made for the proposed St. Louis, Bartlesville & Pacific Railroad on the request of the Jackson-McKernan Construction Co. of New York, which is to finance it. The new survey is to Welch, Okla., from Miami instead of Blue Jacket, in order to avoid being too close to the Frisco system. D. H. Rhoades, 213 West Fourth street, Joplin, Mo., is chief engineer.

Blytheville, Ark.—William Wilms, one of the incorporators of the Blytheville, Leachville & Arkansas Southeastern Railway Co., is said to represent the Paepke-Leicht Lumber Co. and the Chicago Mill & Lumber Co. The railroad company, as heretofore stated, is to build 50 miles of line connecting Blytheville, Leachville and Lepanto, Ark. The road will also reach Glencoe and Big Lake; headquarters to be at Little Rock, Ark.

Calera, Ala.—The Louisville & Nashville Railroad Co. is reported to have completed second track between Calera and Boyles, near Birmingham, 32 miles, excepting 1 1/4 miles at Brooks Mountain, where a tunnel three-quarters of a mile long is being constructed, and will be completed this year.

Charleston, W. Va.—C. P. Peyton, chief engineer for the Charleston, Parkersburg & Western Railway, is reported as saying that contracts will not be let this year. The proposed line is from Charleston to Parkersburg, W. Va., and Sissonville, Spencer and Palestine. Some surveys have been made and some right of way is secured; president, A. S. Alexander of Charleston, W. Va.

Dawson, Ga.—The Georgia Southwestern & Gulf Railroad Co. has been empowered to issue \$4,000,000 of stock and \$4,000,000 of bonds for its proposed line from Dawson through Terrell, Calhoun, Dougherty, Baker, Miller and Decatur counties, Ga., to a point on the

Gulf coast in Florida, 155 miles; president, W. M. Legg; secretary, H. A. Bruton, both at Dawson, Ga.

Frederick, Md.—The Washington, Frederick & Gettysburg Railway Co. has let a contract to J. E. McDonough & Co. to build its extension from Lewistown to Catoclin Furnace, 3 1/2 miles, where it will connect with the Monocacy Valley Railroad. This will give a through line from Frederick to Thurmont, Md., 15 miles. An official letter to the Manufacturers' Record says that it is expected to complete the line from Thurmont to Emmitsburg this year. This calls for an extension of seven miles. D. Columbus Kemp of Frederick is president.

Galveston, Texas.—The railroads are reported to have sustained \$10,000,000 or \$12,000,000 of damage by the recent flood. It is estimated that a total (covering all lines) of 430 miles of track was washed out and that 30 bridges were destroyed. Considerable damage was also sustained to equipment. All the prominent lines are affected.

Glenville, W. Va.—An official of the Glenville & Kanawha Railroad Co. is reported as saying that contracts will be let as soon as financing can be arranged for the proposed line from Glenville to Weston, W. Va., 28 miles. Robert L. Ruddell is general manager and Frederick Lewis is chief engineer, both at Glenville.

Guthrie, Okla.—The Guthrie & Interurban Railway Co. of Guthrie, capital \$100,000, has been chartered to build a line from Guthrie to a point on the Cimarron river, five miles. The incorporators are C. R. Renfro, F. E. Houghton, G. Crow and R. E. Overton, all of Guthrie, Okla., and E. C. Brown of St. Louis.

Harrisville, W. Va.—Construction is reported begun at Beaver Rock on the Harrisville & Cornwallis Railroad by Superintendent E. A. Fleming. A. Wolverton is chief engineer. The line will be about seven miles long. W. S. Stout and others are interested.

Heidelberg, Ky.—The Louisville & Atlantic Railroad is reported to have completed and put in operation its four-mile branch from Heidelberg to Idamay, to handle coal.

Hereford, Texas.—Construction reported begun at Hereford by the Southwest Engineering Co. on the Colorado, Hereford & Gulf Railway, which will be altogether about 1500 miles long and will connect Trinidad, Col., Hereford, Big Springs, San Angelo, San Antonio and Port Lavaca, Texas. A. E. Goodenough, Hereford, Texas, is general manager.

Johnson City, Tenn.—Reported that six miles of track and eight bridges were washed away on the Embreeville branch of the Southern Railway. W. B. Crenshaw is engineer at Knoxville, Tenn.

Little Rock, Ark.—C. J. Kramer, president of the Little Rock & Hot Springs Interurban Electric Railway, is reported as saying that construction will begin within 60 days on the proposed line, which will be about 55 miles from Little Rock to Hot Springs. A construction company is being organized in Illinois to furnish \$1,200,000 for the work.

Little Rock, Ark.—An official letter to the Manufacturers' Record says that the press report that the Rock Island system contemplates extensive improvements in the Choctaw district in the near future is incorrect.

Lumberton, N. C.—The Virginia & Carolina Southern Railway, it is reported, is preparing to build an extension northward from St. Pauls, N. C., to Hope Mills, N. C., 12 miles. J. F. L. Armfield is president and Jerry Respass chief engineer at Fayetteville, N. C.

McKinney, Texas.—J. G. Gilmer of St. Louis is said to represent St. Louis capitalists who propose to build a railroad westward from McKinney.

Monroe, La.—The Missouri Pacific Railroad Co., it is reported, has placed an order with a New Orleans labor agency for 250 to 500 men for railroad work on its lines in Louisiana. E. F. Mitchell is engineer of construction at St. Louis, Mo. R. L. Moorish is division engineer at Monroe, La.

Mount Sterling, Ky.—The Cincinnati, Kentucky & Virginia Railroad Co., incorporated under North Dakota laws, has filed incorporation papers in Kentucky to build from Cincinnati, Ohio, to Charleston, S. C., about 500 miles. Robert Winn of Mount Sterling represents the company.

Nashville, Tenn.—George K. Armes of Birmingham, Ala., is reported to have begun survey for the Nashville & Huntsville Railroad at Huntsville, Ala., and I. L. McCord for the railroad company will, it is reported, let construction contracts shortly. It is proposed to survey for construction between Huntsville and Elkton, 30 miles, after which work will be started also from the Nashville

end of the line. T. M. Steger of Nashville is president.

New Orleans, La.—The New Orleans, Fort Jackson & Grand Isle Railroad Co. has filed an amendment to its charter to permit an extension from Buras to Southwest Pass, also for a branch to Grand Isle. A. Kennedy is president and C. D. Haines vice-president, both at New Orleans.

New Orleans, La.—An officer of the New Orleans Public Belt Railroad is quoted as saying that construction is practically completed and the road will be operated about August 1 from the Jefferson parish line to Montegut street, 26 miles, double track. The Orleans Engineering Co., 715 Machea street, New Orleans, is the contractor. W. J. Hardee is chief engineer. The Mayor is president of the Belt Railroad Commission.

Paris, Ark.—G. G. Dandridge of Paris, Ark., is reported as saying that construction will begin in September on the proposed electric railway from Paris to Subiaco, six miles. It is expected that an eight-mile extension will finally be built to coal mines of the Southside Anthracite Coal Co. The Paris-Subiaco Traction Co. is to build the road.

Shawnee, Okla.—Charles J. Benson and J. M. Aydelotte, a committee of the Shawnee Chamber of Commerce, are reported as saying that Eastern capital is ready to build the road from Shawnee to Muskogee if towns along the line will do their share in the enterprise. It is expected that construction will begin by the fall.

Shreveport, La.—Reported that the Missouri, Kansas & Texas Railway will make a large expenditure on the Shreveport division for raising grades and improving bridges to avoid damage by flood. J. W. Petheram is chief engineer at Dallas, Texas.

Sistersville, W. Va.—The Union Traction Co., just incorporated, is reported to be for the purpose of operating the road built by the Wetzel-Tyler Electric Railway Co. between Sistersville and New Martinsville, and the line is to be improved. John H. McCoy of Sistersville is president; I. D. Morgan of New Martinsville, vice-president; George E. Work of Sistersville, secretary; E. L. Robinson of New Martinsville, attorney. Among the directors are Henry McCoy, S. G. Messer, Joseph McKay and Ralph Broadwater.

Somerset, Ky.—An official letter to the Manufacturers' Record says there is no truth in the press report that the Cincinnati, New Orleans & Pacific Railway Co. had planned to replace bridges between Cincinnati and Somerset at a cost of \$3,250,000, or to replace bridges between Oakdale and Chattanooga, Tenn., at a cost of \$1,300,000.

Spartanburg, S. C.—All the stock for the Spartanburg extension of the South & Western Railway (Carolina, Clinchfield & Ohio) is reported subscribed in Spartanburg. This provides for the line from the North Carolina boundary to Spartanburg, whence the road will come from Marion and Bostic, N. C. M. J. Caples is general manager and chief engineer at Johnson City, Tenn.

Spartanburg, S. C.—The South & Western Railroad Co. has been chartered in South Carolina to build the proposed extension to Spartanburg for the Carolina, Clinchfield & Ohio Railway. The extension is from Bostic, N. C., to Spartanburg, S. C., as heretofore announced. M. J. Caples is general manager and chief engineer at Johnson City, Tenn.

Tuskaloosa, Ala.—J. M. Dewberry of Birmingham is reported as saying that the route of the railroad of the Birmingham & Gulf Railway & Navigation Co. will be from Tuskaloosa to Gadsden, Ala., and will connect Brookwood, Bessemer, Ensley, Pratt City, Thomas, North Birmingham, East Birmingham, East Lake, Huffman, Clay, Springfield, St. Claire Springs, Ashville, Alabama City and Attalla.

Wayne, W. Va.—The Norfolk & Western Railway Co. is reported, has purchased the seven-mile branch from Wayne southward to the East Lynn coal mines and will improve it. Some extensions may be made. C. S. Churchill is chief engineer at Roanoke, Va.

Wharton, Texas.—The Southern Pacific, it is reported, will erect a new bridge over the San Bernard river. A. V. Kellogg is chief engineer at Houston, Texas.

Winnfield, La.—Reported that the Southern Mineral & Land Improvement Co. of New Orleans will invite bids for the construction of five miles of railroad from Winnfield to its quarry. I. L. Lyons, president; R. M. Walsley, Charles C. Carroll, Warren Kearny, Gustaf R. Westfeldt and others, all of New Orleans, are the directors. J. F. Coleman, Hibernia Bank Building, New Orleans, is chief engineer.

STREET RAILWAYS

Atlanta, Ga.—The Georgia Railway & Electric Co. publishes a resolution of the board of directors for the building of an extension from Brookwood along Peachtree road three miles to Buckhead.

Lake Charles, La.—The Lake Charles Street Railway, it is reported, will extend its line to the suburb of the Hi-Mount Land Co. J. A. Landry is general manager.

Spartanburg, S. C.—The Electric Power & Manufacturing Co. is reported to be making surveys for the proposed extension of the street railway to Saxon Mills.

Staunton, Va.—The Blue Ridge Light & Power Co. has been granted a new franchise. J. M. Spotts is president at Staunton, Va.

Washington, D. C.—Construction is reported begun on the street-railway extension to the Union Station.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Alcohol Engines, etc.—Philip T. Muller, Civilian Clerk, care of Quartermaster's Department, U. S. A., Cienfuegos, Cuba, wants to correspond with manufacturers of stationary and marine alcohol engines, alcohol stills, cooking stoves and lamps.

Asbestos Machinery.—W. A. Overcash, Statesville, N. C., wants catalogues and prices on machinery for mining, cleaning, grinding and preparing asbestos.

Barb Wire.—T. C. Ford, Brookwood, Ala., wants addresses of manufacturers of barb wire and barb wire machinery.

Bell.—H. W. Elder, Columbus, Ga., wants prices on church bell.

Belting.—John H. Monger, North River, Va., wants prices on belting.

Belting.—Stenson & Puff, Palatka, Fla., want belting for lumber mills.

Bollers.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on boiler for heating lodge building.

Bollers.—Board of Water Commissioners, Atlanta, Ga., will receive sealed bids until July 8 for three 300-horse-power horizontal water-tube boilers, working pressure 200 pounds; boilers to be erected, bricked in complete on foundations furnished by city, at Hemphill Pumping Station No. 2, Atlanta Water-works, on Southern Belt Railroad, ready for steam connections by October 1; certified check, \$500; Park Woodward, general manager, Board of Water Commissioners.

Bolting Machinery.—See "Oil-mill Machinery."

Boring and Turning Mill.—Tandem Gas Engine Co., Houston, Texas, in market for second-hand vertical mill to turn and bore balance wheels up to seven or eight feet.

Brick.—See "Building Materials."

Building Materials.—I. R. G. Hewlett, Osyka, Miss., wants prices on lumber, brick, lime, nails, shingles, roofing, doors and windows for \$6000 to \$8000 church building in Amite, La.

Cannery.—L. E. Davis, secretary Chamber of Commerce, Natchez, Miss., wants information on canneries; cost of equipment, capitalization, etc.

Canning Machinery.—See "Evaporators."

Canning Machinery.—W. P. Robertson, Madison, Ga., wants canning machinery for 5000 two-pound cans capacity; also wants 50,000 two-pound cans.

Cars.—J. T. Brand, Lithonia, Ga., wants prices on dump cars; second-hand railway equipment.

Cartons.—Hickory Seed Co., Hickory, N. C., in market for cartons for packing dried fruit; also wants oil paper for packing.

Cement.—J. R. Hackett, Moultrie, Ga., in market for 75 to 100 barrels white cement for art uses; invites samples and prices.

Cement.—Joseph Schad, Wilmington, N. C., wants prices on cement and plaster.

Cement.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on cement.

Chains.—Stenson & Puff, Palatka, Fla., want 40 fathoms bar link pull chain, 600 tons, and 65 fathoms bar link 90-ton chain.

Church Furnishing.—H. W. Elder, Columbus, Ga., wants prices on interior furnishing for \$5000 church building.

Chipper.—H. B. Morgan, Newbern, N. C., wants second-hand hog for chips; Diamond preferred.

Cleaning Machinery.—See "Steam Cleaning Machinery."

Coal.—Bids will be received until June 10 at treasurer's office, U. S. Soldiers' Home, Washington, D. C., for furnishing coal for fiscal year ending June 30, 1909, as follows: Bituminous, about 5600 tons; anthracite, furnace, 460 tons; anthracite, stove, 350 tons; H. M. Kendall, Major, U. S. Army, treasurer.

Coal.—Board of Water Commissioners, Park Woodward, general manager, Atlanta, Ga., will open bids July 8 for furnishing one year's supply of run-of-mine steam coal, 50 per cent. lump, about 12,000 tons, to be delivered f. o. b. two pumping stations at Atlanta Water-works, No. 1 river pumping station on Seaboard Air Line Railway and spur track Western & Atlantic Railroad, and No. 2 station on Southern Belt Railroad, at rate of not less than five cars per week at each station; security bond of \$2000 required.

Cold-storage Plant.—Nants Cold Storage Co., Paris, Tenn., wants bids on installation of \$10,000 cold-storage plant.

Cold Storage.—See "Ice Plant, etc."

Concrete-block Machine.—C. B. Poyer, manager, Victoria, Texas, wants second-hand concrete block machine making face-down blocks 4-32 inches long and 8-12 inches wide.

Concrete Wall.—Bids will be received at U. S. Engineer Office, William W. Harts, Major, Engineers, Nashville, Tenn., until June 27 for constructing concrete river wall at Colbert Shoals canal, near Riverport, Ala.; information on application.

Concrete Work.—Bids will be received at office City Register, Memphis, Tenn., until June 4 for about 1050 feet of 3x3 feet reinforced concrete box culvert in South 3d street at Walker avenue, and in adjacent alleys, together with necessary inlets, etc., and for concrete wall along south side of Gaston avenue, distance of about 140 feet; plans and specifications on file with City Engineer; certified check \$250; James H. Malone, Mayor.

Conduit Reinforcement.—Sealed bids will be received at office of City Secretary, Dallas, Texas, until June 10 for furnishing following quantities bars for reinforcement in new conduit, to be delivered f. o. b. Dallas: 2122 pieces bars 7 feet 8 inches long; 800 pieces 8 feet long; 1000 pieces 2 feet long, and 35,000 linear feet bars 24 to 30 feet in length; steel to have net sectional area of 19 square inches, or nominally 1/4 inch square, and to weigh about .66 pounds per linear foot; mild steel; tensile strength not less than 50,000 pounds per square inch; same form as "mechanical bond bar;" J. B. Winslett, City Secretary.

Cordage.—Glen Morris Supply Co., Glen Morris, Md., wants addresses of manufacturers of sash cord and rope.

Creamery Equipment.—El Reno Wholesale Produce & Cold Storage Co., El Reno, Okla., wants prices on creamery equipment.

Crusher.—See "Chipper."

Crusher.—Autauga Lumber Co., Autauga, Ala., wants hog to work up slabs for boiler fuel.

Crusher.—Autauga Lumber Co., Spur, Ala., in market for hog to work up mill slab into shape for fuel under boiler.

Dies and Stamping Machinery.—Oaks Manufacturing Co., Newbern, N. C., wants addresses of manufacturers of dies and stamping machinery.

Electric-light Plant.—Mayfield Water & Light Co., Mayfield, Ky., wants prices on equipment for electric-light and power plant.

Electric Motors.—Sunnyside Awning Co., Inc., Roanoke, Va., wants electric motors.

Electrical Equipment, etc.—Missouri State Sanatorium, Dr. J. L. Eaton, president, Mt. Vernon, Mo., will open bids June 13 for equipment of power plant, electrical lighting, plumbing and heating system. (See "Miscellaneous Structures," Mt. Vernon, Mo.)

Electric Wiring.—Carl Atkinson, Brown Block, Columbia, Tenn., wants prices on electric wiring.

Elevator.—F. O. Trump, Kearneysville, W. Va., wants 6x8 elevator; to operate 44 feet by water-power; for passengers.

Elevators.—S. Kaplan, Monroe, La., wants prices on electric elevators.

Engine.—See "Gasoline Engine."

Engine.—Stenson & Puff, Palatka, Fla., want double-cylinder engine and full gear, with 40 fathoms bar link pull chain, 600 tons; also 65 fathoms bar link 90-ton chain; for marine railway.

Engine.—See "Gasoline Engine."

Engines.—See "Alcohol Engines, etc."

Engines and Dynamos, etc.—Bids will be received at office of Building for National Museum, Library of Congress, Washington, D. C., until June 18 for furnishing, delivering and installing engines and dynamos, flooring lumber and plumbing fixtures required for new building for National Museum. Specifications and other information furnished on application to above office; Bernard R. Green, superintendent of construction.

Evaporators.—A. L. Womack & Co., Bristol, Tenn., wants addresses of manufacturers of steam fruit evaporators.

Filer and Gummer.—Smyly Richardson, P. O. Box 97, Johnston, S. C., wants machine for filing and gumming gin saws.

Flooring.—Joseph Schad, Wilmington, N. C., wants prices on heart-face quarter-sawn long-leaf yellow-pine flooring.

Flooring.—J. W. Stansel, Columbus, Miss., wants prices on maple and quarter-oak flooring; also on tile flooring.

Flooring.—C. M. Guest, Anderson, S. C., wants prices on maple flooring and 4x4-inch unglazed tile for flooring.

Flooring.—Nants Cold Storage Co., Paris, Tenn., may want hemlock ceiling and flooring.

Furniture.—See "Church Furnishing."

Furniture.—Geo. E. Sattler, 711 North 2d street, Philadelphia, Pa., wants to correspond with manufacturers relative to purchasing, in large quantities, furniture of the "knock-down" variety; hall racks, rockers and settees of oak.

Galvanized Iron Cornice.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on galvanized iron cornice.

Garbage Crematory.—See "Inclinerators."

Gasoline Engine.—A. J. Baldwin & Co., 102 Main street, Dawson, Ga., in market for 25 to 30-horse-power gasoline or kerosene engine; second-hand will do.

Gasoline Engine.—W. A. Wallen, Owenton, Ky., wants gasoline engine.

Glass.—F. O. Trump, Kearneysville, W. Va., wants suggestions and prices on glass for sun parlor.

Grinding Machinery.—See "Asbestos Machinery."

Grinding Machinery.—See "Oil-mill Machinery."

Heater.—Cleveland Belting & Machinery Co., 1922 Scranton road, Cleveland, Ohio, wants one 600-horse-power open heater (Cochran preferred).

Heating Apparatus.—Bids will be received at office of John T. Hume, treasurer Southern Branch, N. H. D. V. S., National Soldiers' Home, Virginia, until June 16 for labor and materials for installing heating and ventilating system in three barracks, mess hall, etc.; instruction and specifications, blank proposal forms and other information can be obtained on application to John T. Hume, treasurer.

Heating Apparatus.—See "Electrical Equipment, etc."

Heating Plant.—Carl Atkinson, Brown Block, Columbia, Tenn., wants prices on heating plant for \$6500 dwelling.

Hemlock Ceiling.—See "Flooring."

Holst.—Enterprise Machine Co., Wilson, N. C., wants chain hoist.

Hoisting Outfit.—American Metallic Packing Co., Lexington, Ky., wants price on hoisting outfit, second-hand, to operate by horse-power.

Ice Plant.—Arthur T. Short, Marion, Va., wants estimates on 5 to 10-ton ice plant.

Ice Plant, etc.—El Reno Wholesale Produce & Cold Storage Co., El Reno, Okla., in market for 60-ton ice plant and large cold storage.

Inclinerators.—Gillespie Bros. & Co., 4 Stone street, New York, want addresses of manufacturers of garbage inclinerators; capacity 20 tons.

Iron Work.—Tarboro Hardware Co., Tarboro, N. C., wants iron for truss roof.

Iron Work.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on structural iron work.

Lamps.—See "Alcohol Engines, etc."

Lathe.—Tandem Gas Engine Co., Houston, Texas, in market for second-hand pulley lathe (New Haven) of 60-inch capacity or five feet.

Leaded Sash.—H. W. Elder, Columbus, Ga., wants prices on leaded sash.

Library Furniture.—Little Rock Public Library Association, S. W. Rebyrn, treasurer, Little Rock, Ark., will want furniture for \$76,000 library building.

Lumber.—Joseph Schad, Wilmington, N. C., wants prices on best quality heart Gulf cypress lumber for exterior and interior finish.

Lumber.—H. W. C. M., care Manufacturers' Record, wants bids on cypress lumber for a specified period; for manufacturing doors, moldings and trim.

Lumber.—See "Building Materials."

Lumber Hogs.—See "Chipper" and "Crusher."

Machine Tools.—Enterprise Machine Co., Wilson, N. C., wants shaper and milling machine.

Machinery Tools.—See "Boring and Turning Mill"; also "Lathe."

Marble-working Machinery.—See "Surfacing Machinery" and "Pneumatic Tools."

Marine Railways.—Edward Corwardin, 501 North 17th street, Richmond, Va., wants information on small marine railways.

Mattress Factory.—L. E. Davis, secretary Chamber of Commerce, Natchez, Miss., wants information on establishment of mattress factory; cost of equipment, capitalization, etc.

Metal Bars.—C. M. Guest, Anderson, S. C., wants prices on metal bars for \$3300 store building.

Metal Laths.—J. R. Hackett, Moultrie, Ga., in market for 2000 yards metal laths; invites samples and prices.

Milling Machinery.—Dainty Food Folks, Hall and Price streets, Savannah, Ga., want prices on machinery for manufacturing pure food specialties.

Mining Machinery.—See "Asbestos Machinery."

Miscellaneous Equipment.—Bids will be received at office of H. F. Hodges, general purchasing officer, Isthmian Canal Commission, Washington, D. C., until June 22 for furnishing air motor generating blasting sets, pneumatic hoists, jacks, hand and push carts, wrenches, files, etc. Blanks and general information relating to Circular No. 445 obtainable from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal., and 410 Chamber of Commerce Building, Tacoma, Wash.; also from U. S. Engineer office in following cities: Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville and Mobile.

Oil-mill Machinery.—Port Arthur Export Co., Inc., Port Arthur, Texas, wants addresses of manufacturers of machinery for grinding cottonseed cake and bolting meal.

Oil Paper.—See "Cartons."

Paper Machinery, etc.—T. C. Ford, Brookwood, Ala., wants addresses of manufacturers of paper machinery; also wants addresses of paper manufacturers in the South.

Paper Manufacturers.—See "Paper Machinery."

Pavement Lights.—J. W. Stansel, Columbus, Miss., wants prices on sidewalk lenses.

Paving.—Bids will be received at office of Commissioners District of Columbia (Henry B. F. Macfarland, Henry L. West and Jay J. Morrow), Washington, D. C., until June 8 for paving discharge channel, Boundary sewer; forms, specifications and other information obtainable at Room 43 District Building.

Paving.—Board of Public Works, L. F. Kolb, secretary, Paducah, Ky., will open bids June 9 for reconstruction of Broadway and Jefferson streets from 9th to 11th streets with bitulthic, asphalt or vitrified brick, as per plans and specifications in office of L. A. Washington, City Engineer.

Paving.—E. E. Ellsworth, Recorder, Johnson City, Tenn., will receive bids until June 18 for paving Improvement districts 1, 2 and 3, and one block on Main street, about 21,000 yards, and 6100 linear feet concrete curb or curb and gutter; plans and specifications in office of L. N. Wilson, City Engineer; certified check or approved bond \$1000.

Paving.—City of Clarksdale, Miss., will receive sealed bids until June 15 for construction of about five miles sidewalk with necessary curbs, gutters, street crossings, driveways and inlets, all of concrete; specifications and bidding blanks obtainable from Walter G. Kirkpatrick, engineer, Jackson, Miss.

Paving.—J. B. Wiaslett, City Secretary, Dallas, Texas, will receive bids until June 8 for improving Ross avenue; separate bids to be submitted on following: Bitulthic pavement on concrete foundation; bitulthic

or bituminous foundation; bituminous material on concrete; bituminous material on bituminous base; rock asphalt, asphalt "A," asphalt "B," asphalt "C," concrete curb; concrete gutter; asphalt "D," vitrified brick; combination concrete curb and gutter; deposit of \$1000 in cash required with each bid; specifications on file.

Piping.—Joseph Schad, Wilmington, N. C., wants prices on about 3000 feet 1½-inch galvanized wrought pipes for railing and iron stairways.

Piping.—Kilwan-Robirds Supply Co., 409 Exchange place, Baltimore, Md., is in the market for 16, 18, 20 and 22-inch diameter spiral riveted pipe; second-hand, in good condition; give location, condition and price.

Piping.—Stenson & Puff, Palatka, Fla., want piping for drykill.

Planing Machinery.—Stenson & Puff, Palatka, Fla., want machinery for planing mill.

Plaster.—See "Cement."

Plumbing.—See "Electrical Equipment, etc."

Plumbing.—Carl Atkinson, Brown Block, Columbia, Tenn., wants bids on plumbing for \$6500 residence.

Pneumatic Tools.—W. A. Wallen, Owenton, Ky., wants pneumatic tools for marble and granite works.

Pulleys and Shafting.—John H. Monger, North River, Va., wants prices on 30 feet 27-16 line shafting, and pulleys, of various sorts.

Pulleys, etc.—Stenson & Puff, Palatka, Fla., want pulleys, shafting and hangers for lumber mill.

Pulley Wheel.—Cleveland Belting & Machinery Co., 1922 Scranton road, Cleveland, Ohio, wants 18-foot pulley wheel, 42-inch face, 12-inch bore.

Rails.—Memphis, Paris & Gulf Railroad Co., Nashville, Ark., wants to lease, with privilege of buying, five miles relaying steel rails, 35 to 60 pounds.

Rails.—J. T. Brand, Lithonia, Ga., wants prices on 1500 feet relay rails, 46, 50 or 56-pound; also one-half mile 16 or 20-pound rails; also dump cars.

Roofing.—See "Building Materials."

Roofing.—See "Tile."

Roofing.—H. W. Elder, Columbus, Ga., wants prices on roofing for \$5000 church building.

Sacking Machinery.—Port Arthur Export Co., Inc., Port Arthur, Texas, wants machinery for sacking cottonseed cake.

Sash.—See "Leaded Sash."

Seating.—H. W. Elder, Columbus, Ga., wants prices on pews for \$5000 church building.

Seating.—I. R. G. Hewlett, Osyka, Miss., wants prices on pews for \$6000 to \$8000 church building at Amite, La.

Shredding and Mixing Machinery.—Southern Cement Co., Birmingham, Ala., wants addresses of manufacturers of machinery for shredding and mixing hair in wall plaster.

Skylight.—Tarboro Hardware Co., Tarboro, N. C., wants skylight for \$4000 warehouse.

Slate.—Joseph Schad, Wilmington, N. C., wants prices on one-inch unfading black slate.

Smoke Consumers.—Philip T. Muller, Civilian Clerk, care of Quartermaster's Department, U. S. A., Cienfuegos, Cuba, wants to correspond with manufacturers of smoke consumers.

Stack.—Cleveland Belting & Machinery Co., 1922 Scranton road, Cleveland, Ohio, wants self-supporting stack, 100 feet high, 60 inches diameter, ¼ or 5-16 plate.

Stamping Machinery.—See "Dies and Stamping Machinery."

Steam-cleaning Machinery.—Southern Machinery & Equipment Co., National Exchange Bank Building, Lynchburg, Va., wants information and prices on clothes-cleaning steam machinery.

Steel Castings.—Olof Ohlson, P. O. Box 14, Vancouver, Wash., wants addresses of manufacturers of malleable steel castings suitable for axles for railway cars.

Steel Ceilings.—Joseph Schad, Wilmington, N. C., wants prices on steel ceilings.

Steel Ceiling.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on steel ceiling.

Steel Cells.—E. E. Smith, chairman of committee, Bowdon, Ga., wants descriptions and prices of single and double steel jail cells.

Sterilizing Machinery.—Philip T. Muller, Civilian Clerk, care of Quartermaster's Department, U. S. A., Cienfuegos, Cuba, wants to correspond with manufacturers of milk-sterilizing machines.

Stores.—See "Alcohol Engines, etc."

Structural Steel.—F. O. Trump, Kearneys-

ville, W. Va., wants suggestions and prices on structural steel for sun parlor.

Surfacing Machines.—W. A. Wallen, Owenton, Ky., wants surfacing machines for marble and granite works.

Telephone Cable.—Horton Telephone Co., North Wilkesboro, N. C., wants about half mile cable (25 and 50 pair for outside).

Tile.—See "Flooring."

Tile.—Eddins Manufacturing Co., Gainesville, Fla., wants prices on roof tile.

Tools.—See "Pneumatic Tools."

Tunnel and Conduit Construction.—Missouri State Sanatorium, Dr. J. L. Eaton,

president, Mt. Vernon, Mo., will receive bids until June 13 for erection of concrete tunnel and conduit. (See "Miscellaneous Structures," Mt. Vernon, Mo.)

Ventilating System.—See "Heating Apparatus."

Ventilator.—Tarboro Hardware Co., Tarboro, N. C., wants ventilator for \$4000 warehouse.

Water-works.—Mayfield Water & Light Co., Mayfield, Ky., wants prices on water-works equipment.

Wireworking Machinery.—T. C. Ford, Brookwood, Ala., wants addresses of manufacturers of barb-wire machinery.

INDUSTRIAL NEWS OF INTEREST

Capital Wanted for Manufacturing.

Capital is wanted for manufacturing a new turbine pump for mining, irrigation, public supply, etc. For details address "Pump," care the Manufacturers' Record.

Allis-Chalmers in Birmingham.

The Allis-Chalmers Company of Milwaukee, Wis., has established offices at Birmingham, Ala., 319-320 First National Bank Building, in charge of Seldon Jones as district manager.

Wants Agents for Cranes.

A Northern manufacturer of cranes and hoists wants agents to sell cranes and hoists in the Birmingham district. For particulars address No. 306, care the Manufacturers' Record.

Electric Motors Offered.

A number of electric motors of standard manufacture are for sale by the Henry E. Cook Mill Co., 1052 North Front street, Baltimore, Md. The motors range from ¼ to 30-horse-power, and are offered because of proposed change in company's location.

Ready to Meet Demands.

The Blakeley Bobbin Co. of Blakeley, Ga., has completed its factory, and is ready to meet demands for speeder and slubber bobbins, skewers and clearer rolls. This company has a modern equipment of machinery, and will quote prices for immediate deliveries.

Manufacturing Plant for Sale.

On June 16 the plant of the Howe Manufacturing Co. at Louisville will be offered for sale. This property includes substantial buildings, machinery, patterns, etc. Catalogue of full details obtainable by addressing Burton-Whayne Company, 237 5th street, Louisville, Ky.

Improved Polishes for Metals.

George William Hoffman, 549 East Washington street, Indianapolis, Ind., well known as a manufacturer of metal polish, has two brands selling all over the world. Mr. Hoffman has added to his line by bringing out a fluid polish that is inflammable. This fluid polish adapts itself to any metallic surface, and has even been used on precious stones.

Manager of Drive Chain Department.

James S. Watson, manager of the drive-chain department of the Link Belt Company, has transferred his headquarters from the Philadelphia works to the company's chain manufacturing plant at Indianapolis. In his new field Mr. Watson will combine supervision of manufacture with direction of the selling force handling the Renold silent and roller chains.

Signs of Returning Activity.

The National Paint Works of Williamsport, Pa., has received within the past ten days unusually heavy orders, covering about all the various classes of paint users. One of the surest signs of good times is that many of these orders are for work where this paint was specified by engineers and architects some time ago and work suspended last fall during the panic.

Virginia Timber Land Offered.

Privately-sealed bids will be opened on June 30 for the purchase of timber and timber lands on the James river in Surry county, Virginia. The property comprises 2700 acres of land and the timber on 500 acres. Full details can be obtained by addressing Theo. Tunis and Alvah H. Martin, receivers of the Tunis Lumber Co., 1215 Bank of Commerce Building, Norfolk, Va.

Woodward, Wight & Co.

Woodward, Wight & Co., Ltd., New Orleans, La., founded in 1865, have increased their capital stock from \$125,000 to \$320,000 and announced the policy of doing a strictly trading business, buying and selling machin-

ery, merchandise, etc., and eliminating the contracting and advancing feature heretofore maintained. Pearl Wight remains president of the company, but a number of the younger men who have grown up with the firm will be taken in as stockholders. The general manager will be J. B. Simmons, who since 1903 has been assistant secretary and sales manager.

Wico Ring and Roller Timer.

The Wico ring and roller timer is simple, accessible, compact and durable. The ring makes a direct current between the two contact points, bridging a gap of about a quarter of an inch, and reduces resistance to a minimum. It prevents wear on the bearings caused by the current passing through them. The ring receives all electrical action. When worn, the ring can be easily removed by lifting it out with the finger and similarly replaced, practically making a new timer. This and other Wico electrical specialties are described in detail in a catalogue obtainable from the Withersbee Igniter Co., 604 Continental Building, Baltimore, Md.

Fairbanks, Morse & Co.

Last April Messrs. Fairbanks, Morse & Co. removed their general offices and sales departments to their new building at Wabash avenue and Eldredge place, Chicago, and there the firm is now fully installed. The new building is a seven-story structure 43x165 feet. On the first floor are shown gas and gasoline engines, dynamos and motors, steam and power pumping machinery, scales, windmills, etc.; on the second are the machinery, scale and order departments; on the third are the foreign, electrical and billing departments; on the fourth are the administrative offices; on the fifth are the purchasing, windmill and general supply departments; on the sixth are the railroad and construction departments, and on the seventh is the advertising department. The firm also has a new warehouse, five stories high, 100x100 feet.

Confusion of the Terms "Asphalt" and "Pitch."

Anyone who has had frequent occasion to read specifications for roofing or waterproofing has probably noticed the indefinite way in which the terms asphalt and pitch are often used. Sometimes they are assumed to mean one and the same thing, sometimes they are regarded as alternates, and sometimes asphalt will be mentioned where the context and general practice clearly indicate that coal-tar pitch is meant. This is found not only in specifications for unimportant work prepared by men of limited experience, but occurs in the case of engineers, architects and contractors of wide reputation engaged on large and costly undertakings. As a matter of fact, the general term is pitch, and it includes all substances of that nature from whatever source, the dictionary definition of asphalt being "mineral pitch." Therefore, while all asphalt may be called pitch, all pitch cannot be termed asphalt. When asphalt is specified in the manner above described, the chances are much in favor of coal-tar pitch being used, as few inspectors are capable of distinguishing between the two. Bidders who estimate in good faith on the use of asphalt find their figures too high for consideration, and to get the work must either get the specifications relaxed or, if less scrupulous, use coal tar pitch anyway, a practice that cannot well be defended. It would be far better from both an ethical and an engineering point of view if accurate terms of specification were arrived at in the first place and used with a proper understanding of their meaning. If asphalt is required, it should be specified by brand or place of origin, and if coal tar pitch is desired it should be plainly specified as such. These points are outlined by the Barrett Manufacturing Co., manufacturer of coal-tar pitch, Philadelphia, New York and other cities.

An Economical Composition for Pipe Joints.

In laying pipe for water and other services one of the most important results to be accomplished is that of perfectly tight joints between the various sections of pipe. For years lead was almost exclusively used, and while the results were more or less satisfactory, there has always been a demand for a substitute which would be economical both in time and cost, and besides give equal or better joints. To meet this demand leadite was introduced, and the results which have followed its use for years have demonstrated its capabilities. This material is a substitute for lead, and is composed of mineral ingredients. It weighs 118 pounds per cubic foot when melted in block form; lead weighs 705 pounds per cubic foot. Leadite is melted and poured into the joint in the same manner as lead, but, it is claimed, no caulking is required, as it takes a tight grip on the pipe, and if the joints are properly made will not blow out under any pressure, and the older the joint the more pressure it will withstand. Leadite costs about one-third as much as lead, and its economy is enhanced by the fact that it requires no caulking and a smaller bell hole. During the recent convention of the American Water-works Association a question was raised as to the use of leadite as a substitute for lead joints for cast-iron pipe, and the experiences related by those entering the discussion who had used it was that the results were fully satisfactory, and not only was it less costly than lead, but that joints could be made much more quickly. The Leadite Co. of America, Heed Building, 1215 Filbert street, Philadelphia, Pa., has published a booklet which describes leadite, illustrates its use and gives instructions for melting and pouring leadite joints, together with testimonials from those who have used it in all parts of the country.

Orders 100 Burroughs Adding Machines.

Frank A. Munsey signed an order the other day for 100 Burroughs adding and listing machines. This is evidence of the important part which the Burroughs performs in doing the world's work today. Mr. Munsey procured samples of different types of adding-and-listing and non-listing machines, and gave each several months' trial as to accuracy, convenience, speed, durability, constancy of service, etc. The order calls for the latest wide-carriage Burroughs machines, equipped with column release buttons and eliminating button for bookkeeping work. These machines will be used by the Frank A. Munsey Company and associated companies, including the Mohican Stores, with headquarters in the Flatiron Building, New York. The branch managers of these stores make out daily reports to the home offices, which would require much time and work if handled in the ordinary hand-and-mind way. By using the Burroughs, however, the day's transactions are recorded on the report sheets and duly tabulated as fast as an operator can touch the keys and move the lever.

The Time, the Place and the Blower.

The time is June 4-12, the place is Toronto, Canada, and the blower is the Sturtevant. Members of the American Foundrymen's Association and of the Foundry Supply Association understand that a turbine cupola blower will be in operation at the Toronto convention on the above dates. This blower will furnish blast for the French cupola to be exhibited by J. de Clercy of Montreal. This cupola exhibit should prove of great interest. The air supply is heated by being drawn through a hollow shell surrounding the cupola just below the charging door. As installed at Toronto, the blast will be put on in the morning and iron will be poured for an hour. After being banked for two hours at lunch time the cupola will be run again for two hours in the afternoon. Since the cupola will demonstrate its capacity for furnishing iron continuously, and also the ease of starting and stopping, there will be an opportunity to observe the Sturtevant turbine blower under trying conditions. Among other features, the visitor will note the absence of belts and gears, the entire enclosure of all moving parts, and the compact appearance of the set; also that the turbine requires practically no attention, runs without vibration and with no noise. Its durability, one of its greatest advantages, cannot be proven by a few days' operation, but the foundryman who examines the apparatus and understands the interior construction, with its indestructible buckets cut out of the solid forging, can easily see that its service is like that of the Sturtevant blower, which has numerous records of daily operation for 30 years. The B. F. Sturtevant Company of Hyde Park, Mass., manufactures the blower.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., June 3.

There was only a moderate degree of activity in the Baltimore stock market during the week. United Railways common sold at 10½; do. trust certificates from 10½ to 10¾; United income bonds from 52¼ to 50¾, reacting to 51½, with last sale at 51; do. funding 5s from 79½ to 79¾, and ex-coupon from 76¾ to 76¾; do. do. scrip at 79½, and then from 76¼ to 77 after the interest period; United 4s, 85¾ to 85¼; Consolidated Gas, Electric Light & Power preferred, 75½ to 75; do. 4½s, 78½; Gas 6s, 104¼; do. 5s, 100; do. 4½s, 90; Seaboard 4s, 51 to 51½; Consolidated Cotton Duck preferred, 22¼; Mt. Vernon-Woodberry Cotton Duck 5s, 73 to 73¾; G-B-S. Brewing 1st, 43.

Bank shares sold as follows: Citizens', 32; Mechanics', 25½; First National, 105; Western, 25.

Maryland Casualty sold at 61 to 62½; Fidelity & Deposit, 125 to 123; American Bonding, 45½; Mercantile Trust, 115 to 114.

Other securities were traded in as follows: Atlantic Coast Line of Connecticut 4s, certificates, 5-20s, 82; Baltimore & Harrisburg 1st 5s, 100; Baltimore, Sparrows Point & Chesapeake 4½s, 93 to 93½; City & Suburban (Baltimore) 5s, 109¾ to 107¾; Georgia, Carolina & Northern 5s, 99; Washington-Vandemere 4½s, 94 to 93½; Northern Central Railway stock, 89 to 90; Anacostia & Potomac 5s, 100 to 99; Baltimore & Annapolis Short Line 5s, 99; Carolina Central 4s, 80; Charleston Consolidated Electric 5s, 88; Coal & Coke Railway 5s, 82; Coal & Iron Railway 5s, 98; West Virginia Central 6s, 103½; Baltimore City 3½s, 1980, 95½ to 95¾; Maryland Telephone 5s, 90¼ to 95; Charleston & Western Carolina 5s, 100¼; Norfolk Railway & Light 5s, 90½; Northern Central Railway 4½s, 105½; Richmond, Fredericksburg & Potomac 4½s, 1940, 100¾; Baltimore Traction 5s, 108½; North Carolina 4s, 100; Baltimore City 4s, 1954, 104; Atlantic Coast Line Consolidated 4s, 92¾ to 93; Virginia New 3s, 91; Augusta Railway & Electric 5s, 97½; Georgia & Alabama Consolidated 5s, 97; City & Suburban (Washington) 5s, 101 to 101½; Virginia Electric Railway & Development 5s, 95; Wabash Pittsburg Terminal 4s, 46½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
June 3, 1908.

Railroad Stocks.		Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	205	230	
Georgia South. & Fla. 1st Pfd.	100	80		
Seaboard Company Common.	100	6	7	
Seaboard Company 2d Pfd.	100	11¼	12¼	
United Railways & Elec. Co.	50	10¼	10½	
Western Maryland.	50	5½	6¼	
Bank Stocks.				
Citizens' National Bank.	10	31½		
Com. & Farm. White Cfs.	100		100	
Farmers & Mer. Nat'l Bank.	40		50	
First National Bank.	100	125	127½	
German-American Bank.	100	107		
National Howard Bank.	10	12		
National Marine Bank.	10	25		
National Mechanics' Bank.	10	25½		
National Union Bank of Md.	100	115	120	
Third National Bank.	100	113		
Western National Bank.	20		35	
Trust, Fidelity and Casualty Stocks.				
Maryland Casualty.	25	61		
Merc. Trust & Deposit.	50	112¼	115	
Union Trust.	50	57		
Miscellaneous Stocks.				
Alabama Con. Coal & Iron.	100	25	35	
Ala. Con. Coal & Iron Pfd.	100	70		
Con. Gas, Elec. Lt. & P. Pfd.	100		75	
Consolidation Coal.	100	86	88	
G-B-S. Brewing Co.	100		4½	
George's Creek Coal.	100		71¼	
Railroad Bonds.				
Albany & Northern 5s, 1945.	93½	96		
Atlanta & Charlotte Ext. 4½s.	99			

Atlantic Coast Line 1st 4s, 1952.	92¾	93
Atlan. Coast Line 4s, Cfs, 1952.	72½	74¼
Atlan. Coast Line (S. C.) 4s, 1948.	94	94½
Baltimore & Harrisburg 5s, 1938.	100	
Balto. & Harrisburg Ext. 5s, 1938.	101	
Carolina Central 4s, 1949.	79¼	80
Charleston & West. Car. 5s, 1946.	100¼	102
Charlotte, Col. & Aug. 1st 5s, 1910.	102½	
Coal & Coke Railway 5s.	80	86
Coal & Iron Railway 5s, 1939.	98	100
Florida Southern 4s, 1940.	88	
Georgia & Alabama 5s, 1943.	96¾	97½
Ge. Car. & North. 1st 5s, 1929.	98	
Georgia Pacific 1st 6s, 1922.	109¼	111½
Ge. South. & Fla. 1st 5s, 1945.	104	105
Maryland & Pennsylvania 4s, 1951.	85	
Potomac Valley 1st 5s, 1941.	101	104
Richmond & Danville Gold 6s, 1915.	108	110
Richmond & Mecklenburg 1st 4s.	73	73½
Sav. Fla. & West. 5s, 1934.	107	
Seaboard Air Line 4s, 1950.	51	51½
Seaboard Air Line 5s, 10-year, 1911.	87	88
Seaboard Air Line 5s, 3-year.	88½	90
Seaboard & Roanoke 6s, 1916.	105	
Seaboard & Roanoke 5s, 1926.	102	103
South Bound 5s, 1941.	97½	99
Southern Railway Con. 5s, 1944.	100	100¼
Virginia Midland 2d 6s, 1911.	103	
Virginia Midland G. M. 5s.	105½	
Western Maryland 4s, 1952.	72	73
Western Va. 4s, 1914.	107	109
West Va. Cent. 1st 6s, 1911.	103¼	
Wilmington & Weld. Gold 5s, 1935.	108½	

Street Railway Bonds.				
Anacostia & Potomac 5s, 1949.	96	100		
Augusta Railway & Elec. 5s, 1940.	95			
Baltimore City Pass. 5s, 1911.	101			
Balto., Sp. Pt. & C. 4½s.	93	93½		
Baltimore Traction 1st 5s, 1929.	108¼	110¼		
Balto. Trac. (N. B. Div.) 5s, 1942.	111	112		
Central Railway (Balto.) 6s.	102¼			
Central Ry. Ext. 5s (Balto.), 1932.	108			
Charleston Tel. & Elec. 5s, 1909.	87¼	90		
Charleston Con. Elec. 5s, 1909.	87¼	90		
City & Suburban 5s (Balto.), 1922.	107½	108½		
City & Suburban 5s (Wash.), 1918.	101	103		
Knoxville Traction 1st 5s, 1928.	103			
Lake Roland Elev. 6s, 1942.	108¼			
Norfolk Railway & Light 5s.	90¼			
Norfolk St. Ry. 5s, 1944.	105	107¼		
Richmond Traction 5s.	103			
United Railways 1st 4s, 1949.	85	85¼		
United Railways Inc. 4s, 1949.	51	51¼		
United Railways Funding 5s.	76½	76¾		

Miscellaneous Bonds.				
Baltimore Electric 5s.	85	87		
Brush Electric 5s.	103½			
Consolidated Gas 6s, 1910.	104¼	104½		
Consolidated Gas 5s, 1939.	109	110		
Consolidated Gas 4½s.	89	90		
Con. Gas, Elec. Lt. & P. 4½s.	76½	78		
G-B-S. Brewing 1st 4s.	42¾	43¼		
G-B-S. Brewing Inc. 5s.	13½	16		
Marland Telephone 5s.	92½	94		
Mt. Vernon-Woodberry Coal Duck 5s.	73½	74		
United Elec. Lt. & P. 4½s.	85	85½		

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh Mac-
Rae & Co., Wilmington, N. C., for
Week Ending June 1.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	51	
Aiken Mfg. Co. (S. C.)	90	
American Spinning Co. (S. C.)	145	148
Anderson Cotton Mills (S. C.)	70	
Arkwright Mills (S. C.)	105	110
Augusta Factory (Ga.)	65	70
Avondale Mills (Ala.)	115	125
Belton Mills (S. C.)	105	108
Biola Mfg. Co. (Ga.)	113½	
Brandon Mills (S. C.)	125	
Cabarrus Cotton Mills (N. C.)	125	
Chiquola Mfg. Co. (S. C.)	127	
Clifton Cotton Mills (S. C.)	102	106
Clifton Mfg. Co. (S. C.) Pfd.	99½	101
Clinton Cotton Mills (S. C.)	120	
Columbus Mfg. Co. (Ga.)	98	
Courtenay Mfg. Co. (S. C.)	97½	
Dallas Mfg. Co. (Ala.)	90	95
Darlington Mfg. Co. (S. C.)	78	80
Drayton Mills (S. C.)	125	137½
Eagle & Phenix Mills (Ga.)	135	150
Enoree Cotton Mills (S. C.)	69	80
Enoree Mfg. Co. (S. C.) Pfd.	100	
Enterprise Mfg. Co. (Ga.)	85	90
Exposition Cotton Mills (Ga.)	240	
Gaffney Mfg. Co. (S. C.)	75	
Gainesville Cotton Mills (S. C.)	55	
Granby Cot. Mills (S. C.) 1st Pfd.	100	
Granville Mfg. Co. (S. C.)	160	
Greenwood Cotton Mills (S. C.)	90	
Grendel Mills (S. C.)	115	118
Henrietta Mills (N. C.)	160	175
King Mfg. Co., John P. (Ga.)	99	
Lancaster Cotton Mills (S. C.)	115	125
Lancaster Cot. Mills (S. C.) Pfd.	91	96
Langley Mfg. Co. (S. C.)	91	98
Laurens Cotton Mills (S. C.)	140	
Lockhart Mills (S. C.)	85	
Lockhart Mills (S. C.) Pfd.	97	
Loray Mills (S. C.)	90	98
Marlboro Cotton Mills (S. C.)	80	85
Mayo Mills (N. C.)	165	185
Mills Mfg. Co. (S. C.)	103	
Mills Mfg. Co. (S. C.) Pfd.	110	
Monarch Cotton Mills (S. C.)	113	
Newberry Cotton Mills (S. C.)	145	
Norris Cotton Mills (S. C.)	115	
Olympia Cot. Mills (S. C.) 1st Pfd.	68	
Orangeburg Mfg. Co. (S. C.) Pfd.	80	98
Orr Cotton Mills (S. C.)	100	105
Pacolet Mfg. Co. (S. C.)	153	
Pacolet Mfg. Co. (S. C.) Pfd.	95	97
Pelzer Mfg. Co. (S. C.)	165	167½
Piedmont Mfg. Co. (S. C.)	175	
Poe Mfg. Co. (S. C.)	114	139
Raleigh Cotton Mills (N. C.)	105	
Richland Cot. Mills (S. C.) Pfd.	55	
Roanoke Mills (N. C.)	175	
Saxon Mills (N. C.)	122	128
Sibley Mfg. Co. (Ga.)	50¼	63
Spartan Mills (S. C.)	140	145
Springstein Mills (S. C.)	100	
Tucapau Mills (S. C.)	105	
Trion Mfg. Co. (Ga.)	60	
Union-Buffalo Mills (S. C.) 1st Pfd.	120	126¼
Victor Mfg. Co. (S. C.)	92	93½
Warren Mfg. Co. (S. C.) Pfd.	105	
Washington Mills (Va.)	22	25
Washington Mills (Va.) Pfd.	100	110
Whitney Mfg. Co. (S. C.)	140	
Williamson Mills (S. C.)	114	
Wiscasset Mills (N. C.)	120	125
Woodruff Cotton Mills (S. C.)	122	130
Woodside Cotton Mills (S. C.)	104	105

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending June 1.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	80	80
Aetna Cotton Mills (S. C.) Pfd.	80	80
Aiken Mfg. Co. (S. C.)	82	82
American Spinning Co. (S. C.)	145	145
Anderson Cotton Mills (S. C.)	75	75
Aradia Mills (S. C.)	95	100
Arkwright Cotton Mills (S. C.)	105	100
Augusta Factory (Ga.)	65	70
Avondale Mills (Ala.)	110	110
Belton Mills (S. C.)	103	107
Brandon Mills (S. C.)	120	125
Brogan Mills (S. C.)	40	45
Cabarrus Cotton Mills (N. C.)	125	125
Chadwick Mfg. Co. (N. C.) Pfd.	103	103
Chiquila Mfg. Co. (S. C.)	120	125
Clifton Mfg. Co. (S. C.)	103	107
Clifton Mfg. Co. (S. C.) Pfd.	101	101
Clinton Cotton Mills (S. C.)	120	120
Columbus Mfg. Co. (Ga.)	94	98
Courtenay Mfg. Co. (S. C.)	100	100
Dallas Mfg. Co. (Ala.)	90	95
Darlington Mfg. Co. (S. C.)	80	85
D. E. Converse Co. (S. C.)	112	112
Drayton Mills (S. C.)	100	100
Eagle & Phenix Mills (Ga.)	135	135
Easley Cotton Mills (S. C.)	145	150
Enoree Mfg. Co. (S. C.)	70	82
Enoree Mfg. Co. (S. C.) Pfd.	100	102
Enterprise Mfg. Co. (Ga.)	82	90
Exposition Cotton Mills (Ga.)	225	225
Gaffney Mfg. Co. (S. C.)	75	75
Gainesville Cotton Mills (Ga.)	60	60
Glenwood Cotton Mills (S. C.)	122	122
Gluck Mills (S. C.)	90	98
Granby Cot. Mills (S. C.) 1st Pfd.	50	50
Granville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	90	94
Grendel Mills (S. C.)	115	117½
Hartsville Cotton Mill (S. C.)	115	120
Henrietta Mills (N. C.)	165	165
Inman Mills (S. C.)	100	110
King Mfg. Co., J. P. (Ga.)	97	102
Lancaster Cotton Mills (S. C.)	109	109
Lancaster Cot. Mills (S. C.) Pfd.	92	96
Langley Mfg. Co. (S. C.)	92	96
Laurens Mills (S. C.)	150	162
Limestone Mills (S. C.)	140	150
Lockhart Mills (S. C.)	75	80
Lockhart Mills (S. C.) Pfd.	101	101
Loray Cotton Mills (N. C.) Pfd.	90	100
Marlboro Cotton Mills (S. C.)	80	90
Mills Mfg. Co. (S. C.)	105	105
Molokoh Mfg. Co. (S. C.)	100	100
Monaghan Mills (S. C.)	112	112
Monarch Cotton Mills (S. C.)	98	102
Newberry Cotton Mills (S. C.)	127	127
Ninety-Six Cotton Mills (S. C.)	115	120
Norris Cotton Mills (S. C.)	117	122
Odell Mfg. Co. (N. C.)	90	90
Olympia Cotton Mills (S. C.)	70	80
Orr Cotton Mills (S. C.)	100	105
Pacolet Mfg. Co. (S. C.)	165	165
Pacolet Mfg. Co. (S. C.) Pfd.	101	104
Pelzer Mfg. Co. (S. C.)	167	175
Piedmont Mfg. Co. (S. C.)	170	170
Poe Mfg. Co., F. W. (S. C.)	125	130
Saxon Mills (S. C.)	122	130
Sibley Mfg. Co. (Ga.)	58	63
Spartan Mills (S. C.)	140	148
Trion Mfg. Co. (Ga.)	132	140
Tucapau Mills (S. C.)	200	200
Union-Buffalo (S. C.) 1st Pfd.	70	70
Union-Buffalo (S. C.) 2d Pfd.	20	25
Victor Mfg. Co. (S. C.)	120	120
Warren Mfg. Co. (S. C.)	90	97
Warren Mfg. Co. (S. C.) Pfd.	102	107
Washington Mills (Va.)	20	25
Washington Mills (Va.) Pfd.	100	105
Waverly Mills (S. C.)	103	106
Whitney Mfg. Co. (S. C.)	104	104
Williamston Mills (S. C.)	104	104
Wiscasset Mills (N. C.)	127	127
Woodruff Cotton Mills (S. C.)	124	130
Woodside Cotton Mills (S. C.)	110	110

